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Appendix A: Route Analysis

Introduction

Appendix A displays the site-specific resource information and required mitigation measures for all of the motorized trails proposed in the alternatives as additions to the National Forest Transportation System (NFTS). Table A-1 below displays the following information for each proposed motorized trail to the NFTS.

- The unique **route ID** used throughout the document and maps for each motorized trail addition to the NFTS
- The **reason for adding** is the determination made by the interdisciplinary team that justified the need for the proposed road to the system.
- The **vehicle class (also known as maintenance level) and season of use** that would be authorized, should the motorized trail be added to the NFTS in each respective alternative. The possible combinations of season of use are listed in table A-1, below. All roads will be brought in as Maintenance Level 2 roads– which are open to all vehicles.

Season of Use	Reason for Adding to System
W – 4/1 to 12/15	**A** - To provide motorized access to dispersed camping
X – 5/1 to 11/30	**B** - Provide a diversity of motorized recreation opportunities
Y – 5/1 to 2/14	**C** - To assure adequate access to public and private lands
Z - Open all year	

SU—season of use

ML—maintenance level (ML2 is open to all vehicles)

Table A-1. Maintenance Level, Season of Use, and Length of Routes

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
Route ID	*Reason for Adding*	*ML*	*SU*	*ML*	*SU*	*ML*	*SU*	Length ***(miles)***
BA101	A	2	Z	2	Z	2	Z	0.20
BA104	A	2	Z	2	Z	2	Z	0.25
BA105	A	2	Z	2	Z	2	Z	0.02
BA107	A	2	Z	2	Z	2	Z	0.19
BA110	A	2	Z	2	Z	2	Z	0.11
BA111	A	2	Z	2	Z	2	Z	0.08
BA112	A	2	Z	2	Z	2	Z	0.11
BA113	A	2	Z	2	Z	2	Z	0.17
BA115	B	2	Z	2	Z	2	Z	0.67
BA116	A	2	Z		Z	2	Z	0.16
BA117	A	2	Z		Z	2	Z	0.20

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA118	B	2	Z		Z	2	Z	0.97
BA119	A	2	Z		Z	2	Z	0.02
BA120	B	2	Z		Z	2	Z	0.26
BA121	A	2	Z	2	Z	2	Z	0.03
BA122	A	2	Z		Z	2	Z	0.21
BA123	B	2	Z		Z	2	Z	1.94
BA124	B	2	Z		Z	2	Z	1.08
BA125	A	2	Z	2	Z	2	Z	0.09
BA127	B	2	Z	2	Z	2	Z	0.38
BA128	A	2	Z	2	Z	2	Z	0.19
BA129	B	2	Z	2	Z	2	Z	1.01
BA13	A	2	Z	2	Z	2	Z	0.08
BA130	B	2	Z	2	Z	2	Z	0.41
BA131	A	2	Z		Z	2	Z	0.26
BA132	A	2	Z		Z	2	Z	0.19
BA133	A	2	Z	2	Z	2	Z	0.09
BA134	B	2	Z		Z	2	Z	0.49
BA136	B	2	Z	2	Z	2	Z	0.78
BA140	B	2	Z		Z	2	Z	0.49
BA141	A	2	Z		Z	2	Z	0.17
BA142	A	2	Z		Z	2	Z	0.13
BA143	B	2	Z		Z	2	Z	0.50
BA144	A	2	Z		Z	2	Z	0.11
BA149	A	2	Z		Z	2	Z	0.23
BA150	B	2	Z		Z	2	Z	0.33
BA153	B	2	Z	2	Z	2	Z	0.62
BA156	A	2	Z		Z	2	Z	0.09
BA16	B	2	Z	2	Z	2	Z	1.26
BA163	A	2	Z	2	Z	2	Z	0.15
BA164	A	2	Z	2	Z	2	Z	0.04
BA165	A	2	Z		Z	2	Z	0.08
BA169	A	2	Z		Z	2	Z	0.10
BA171	A	2	Z		Z	2	Z	0.15
BA172	B	2	Z		Z	2	Z	0.91
BA173	A	2	Z		Z	2	Z	0.08
BA183	A	2	Z	2	Z	2	Z	0.08
BA185	A	2	Z	2	Z	2	Z	0.13
BA186	A	2	Z	2	Z	2	Z	0.09
BA19	A	2	Z	2	Z	2	Z	0.07

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA191	A	2	Z	2	Z	2	Z	0.11
BA193	A	2	Z	2	Z	2	Z	0.16
BA199	B	2	Z		Z	2	Z	0.51
BA200	A	2	Z	2	Z	2	Z	0.08
BA201	B	2	Z		Z	2	Z	0.44
BA203	B	2	Z		Z	2	Z	0.95
BA205	C	2	Z	2	Z	2	Z	0.27
BA206	A	2	Z	2	Z	2	Z	0.08
BA209	B	2	Z		Z	2	Z	0.57
BA211	B	2	Z	2	Z	2	Z	0.27
BA212	B	2	Z	2	Z	2	Z	0.80
BA213	A	2	Z	2	Z	2	Z	0.20
BA214	A	2	Z	2	Z	2	Z	0.10
BA215	B	2	Z	2	Z	2	Z	0.95
BA216	B	2	Z	2	Z	2	Z	0.45
BA217	B	2	Z	2	Z	2	Z	0.29
BA219	B	2	Z	2	Z	2	Z	0.86
BA2203	B	2	Z	2	Z	2	Z	0.32
BA2204	A	2	Z	2	Z	2	Z	0.09
BA2206	A	2	Z	2	Z	2	Z	0.19
BA2207	B	2	Z	2	Z	2	Z	0.50
BA2208	B	2	Z	2	Z	2	Z	0.48
BA221	A	2	Z	2	Z	2	Z	0.15
BA2214	A	2	Z	2	Z	2	Z	0.17
BA2215	A	2	Z	2	Z	2	Z	0.05
BA2216	A	2	Z	2	Z	2	Z	0.07
BA2217	A	2	Z	2	Z	2	Z	0.22
BA2218	A	2	Z	2	Z	2	Z	0.09
BA222	B	2	Z	2	Z	2	Z	0.10
BA222	A	2	Z	2	Z	2	Z	0.57
BA2221	A	2	Z		Z	2	Z	0.06
BA2223	A	2	Z	2	Z	2	Z	0.25
BA2224	B	2	Z	2	Z	2	Z	0.35
BA2225	A	2	Z	2	Z	2	Z	0.16
BA2226	A	2	Z	2	Z	2	Z	0.25
BA2227	A	2	Z	2	Z	2	Z	0.14
BA223	B	2	Z	2	Z	2	Z	0.56
BA2231	A	2	Z	2	Z	2	Z	0.12
BA2233	A	2	Z	2	Z	2	Z	0.05

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA2234	B	2	Z	2	Z	2	Z	0.28
BA2235	A	2	Z	2	Z	2	Z	0.05
BA2236	A	2	Z	2	Z	2	Z	0.19
BA225	A	2	Z	2	Z	2	Z	0.19
BA2250	A	2	Z		Z	2	Z	0.09
BA2252	A	2	Z	2	Z	2	Z	0.24
BA2253	B	2	Z		Z	2	Z	0.33
BA2254	A	2	Z	2	Z	2	Z	0.25
BA2255	A	2	Z		Z	2	Z	0.11
BA226	B	2	Z	2	Z	2	Z	0.65
BA2260	B	2	Z		Z	2	Z	1.07
BA2263	A	2	Z	2	Z	2	Z	0.04
BA2264	A	2	Z	2	Z	2	Z	0.21
BA2266	A	2	Z	2	Z	2	Z	0.04
BA2267	A	2	Z	2	Z	2	Z	0.06
BA2268	A	2	Z	2	Z	2	Z	0.23
BA2269	A	2	Z	2	Z	2	Z	0.17
BA227	B	2	Z	2	Z	2	Z	0.28
BA2271	A	2	Z	2	Z	2	Z	0.24
BA2272	A	2	Z	2	Z	2	Z	0.25
BA2276	A	2	Z	2	Z	2	Z	0.05
BA2279	B	2	Z		Z	2	Z	0.35
BA228	A	2	Z	2	Z	2	Z	0.09
BA2280	A	2	Z	2	Z	2	Z	0.13
BA2284	A	2	Z		Z	2	Z	0.07
BA2285	A	2	Z		Z	2	Z	0.25
BA2286	A	2	Z	2	Z	2	Z	0.19
BA2287	B	2	Z	2	Z	2	Z	1.06
BA2288	A	2	Z	2	Z	2	Z	0.16
BA2289	A	2	Z		Z	2	Z	0.14
BA229	A	2	Z	2	Z	2	Z	0.11
BA2290	A	2	Z		Z	2	Z	0.09
BA2292	B	2	Z		Z	2	Z	0.29
BA2295	A	2	Z		Z	2	Z	0.16
BA230	B	2	Z	2	Z	2	Z	0.45
BA2301	A	2	Z	2	Z	2	Z	0.14
BA2302	A	2	Z	2	Z	2	Z	0.05
BA2303	B	2	Z	2	Z	2	Z	0.35
BA2304	B	2	Z	2	Z	2	Z	1.58

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA2305	A	2	Z	2	Z	2	Z	0.09
BA2306	A	2	Z	2	Z	2	Z	0.07
BA231	A	2	Z	2	Z	2	Z	0.22
BA233	B	2	Z	2	Z	2	Z	0.82
BA234	A	2	Z	2	Z	2	Z	0.16
BA235	B	2	Z	2	Z	2	Z	1.65
BA236	A	2	Z	2	Z	2	Z	0.08
BA238	B	2	Z	2	Z	2	Z	0.55
BA241	B	2	Z		Z	2	Z	1.67
BA247	B	2	Z	2	Z	2	Z	1.27
BA248	A	2	Z	2	Z	2	Z	0.16
BA249	B	2	Z	2	Z	2	Z	0.38
BA250	B	2	Z	2	Z	2	Z	0.85
BA251	B	2	Z	2	Z	2	Z	1.11
BA252	A	2	Z	2	Z	2	Z	0.16
BA253	B	2	Z	2	Z	2	Z	0.27
BA257	B	2	Z	2	Z	2	Z	0.33
BA258	A	2	Z	2	Z	2	Z	0.21
BA26	B	2	Z	2	Z	2	Z	0.28
BA260	B	2	Z	2	Z	2	Z	0.43
BA265	A	2	Z	2	Z	2	Z	0.23
BA267	A	2	Z	2	Z	2	Z	0.06
BA27	B	2	Z	2	Z	2	Z	0.44
BA271	A	2	Z	2	Z	2	Z	0.07
BA272	A	2	Z	2	Z	2	Z	0.10
BA273	B	2	Z	2	Z	2	Z	0.61
BA278	A	2	Z	2	Z	2	Z	0.05
BA279	B	2	Z	2	Z	2	Z	0.27
BA28	B	2	Z	2	Z	2	Z	0.41
BA283	A	2	Z	2	Z	2	Z	0.22
BA284	A	2	Z	2	Z	2	Z	0.23
BA286	B	2	Z	2	Z	2	Z	0.81
BA288	B	2	Z	2	Z	2	Z	0.59
BA290	B	2	Z	2	Z	2	Z	1.18
BA296	A	2	Z	2	Z	2	Z	0.25
BA297	B	2	Z	2	Z	2	Z	1.37
BA3	A	2	Z	2	Z	2	Z	0.09
BA35	B	2	Z		Z	2	Z	0.61
BA357	A	2	Z	2	Z	2	Z	0.04

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA358	A	2	Z	2	Z	2	Z	0.09
BA359	A	2	Z	2	Z	2	Z	0.09
BA36	A	2	Z		Z	2	Z	0.05
BA363	A	2	Z	2	Z	2	Z	0.07
BA365	B	2	Z	2	Z	2	Z	0.74
BA366	B	2	Z	2	Z	2	Z	0.27
BA368	B	2	Z	2	Z	2	Z	0.41
BA369	A	2	Z	2	Z	2	Z	0.08
BA37	B	2	Z	2	Z	2	Z	0.71
BA370	A	2	Z	2	Z	2	Z	0.09
BA371	A	2	Z	2	Z	2	Z	0.02
BA373	A	2	Z		Z	2	Z	0.13
BA377	B	2	Z		Z	2	Z	0.30
BA378	A	2	Z		Z	2	Z	0.21
BA379	B	2	Z		Z	2	Z	0.51
BA38	B	2	Z	2	Z	2	Z	1.37
BA380	A	2	Z		Z	2	Z	0.16
BA385	B	2	Z		Z	2	Z	0.35
BA386	B	2	Z		Z	2	Z	0.39
BA387	A	2	Z	2	Z	2	Z	0.04
BA389	A	2	Z		Z	2	Z	0.17
BA394	A	2	Z		Z	2	Z	0.13
BA395	B	2	Z		Z	2	Z	0.49
BA396	A	2	Z		Z	2	Z	0.16
BA397	B	2	Z		Z	2	Z	0.64
BA398	A	2	Z		Z	2	Z	0.26
BA406	B	2	Z	2	Z	2	Z	0.53
BA407	B	2	Z	2	Z	2	Z	0.62
BA408	B	2	Z	2	Z	2	Z	0.60
BA410	B	2	Z	2	Z	2	Z	0.57
BA411	A	2	Z	2	Z	2	Z	0.05
BA412	B	2	Z	2	Z	2	Z	0.67
BA413	A	2	Z	2	Z	2	Z	0.08
BA423	A	2	Z	2	Z	2	Z	0.06
BA425	A	2	Z	2	Z	2	Z	0.03
BA43	B	2	Z	2	Z	2	Z	0.46
BA431	A	2	Z	2	Z	2	Z	0.03
BA438	B	2	Z		Z	2	Z	0.26
BA446	A	2	Z	2	Z	2	Z	0.14

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA447	B	2	Z	2	Z	2	Z	0.70
BA448	A	2	Z	2	Z	2	Z	0.19
BA449	A	2	Z	2	Z	2	Z	0.04
BA452	A	2	Z	2	Z	2	Z	0.03
BA453	A	2	Z	2	Z	2	Z	0.18
BA454	B	2	Z	2	Z	2	Z	0.48
BA456	A	2	Z	2	Z	2	Z	0.21
BA458	A	2	Z	2	Z	2	Z	0.06
BA463	A	2	Z	2	Z	2	Z	0.05
BA464	A	2	Z	2	Z	2	Z	0.05
BA465A	A	2	Z	2	Z	2	Z	0.21
BA467	A	2	Z	2	Z	2	Z	0.13
BA47	B	2	Z	2	Z	2	Z	0.31
BA470	B	2	Z	2	Z	2	Z	0.29
BA471	A	2	Z	2	Z	2	Z	0.10
BA472	A	2	Z	2	Z	2	Z	0.12
BA473	A	2	Z	2	Z	2	Z	0.15
BA474	A	2	Z	2	Z	2	Z	0.11
BA475	B	2	Z		Z	2	Z	0.53
BA478	B	2	Z		Z	2	Z	0.40
BA479	B	2	Z		Z	2	Z	0.38
BA48	A	2	Z	2	Z	2	Z	0.09
BA482	B	2	Z	2	Z	2	Z	0.68
BA485	A	2	Z		Z	2	Z	0.11
BA489	A	2	Z	2	Z	2	Z	0.03
BA490	A	2	Z	2	Z	2	Z	0.07
BA491	B	2	Z		Z	2	Z	0.29
BA492	A	2	Z	2	Z	2	Z	0.06
BA493	A	2	Z	2	Z	2	Z	0.05
BA495	C	2	Z	2	Z	2	Z	0.41
BA496	C	2	Z	2	Z	2	Z	0.06
BA497	C	2	Z		Z	2	Z	0.22
BA498	A	2	Z	2	Z	2	Z	0.12
BA499	A	2	Z	2	Z	2	Z	0.16
BA501	C	2	Z	2	Z	2	Z	1.70
BA503	A	2	Z	2	Z	2	Z	0.16
BA51	A	2	Z	2	Z	2	Z	0.08
BA52	B	2	Z	2	Z	2	Z	0.33
BA54	A	2	Z	2	Z	2	Z	0.06

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA540	B	2	Z	2	Z	2	Z	0.31
BA541	A	2	Z	2	Z	2	Z	0.17
BA542	A	2	Z	2	Z	2	Z	0.13
BA543	A	2	Z	2	Z	2	Z	0.15
BA544	A	2	Z	2	Z	2	Z	0.08
BA545	A	2	Z	2	Z	2	Z	0.19
BA546	A	2	Z	2	Z	2	Z	0.03
BA549	A	2	Z	2	Z	2	Z	0.08
BA55	A	2	Z	2	Z	2	Z	0.17
BA553	A	2	W	2	W	2	Y	0.12
BA554	A	2	W	2	W	2	Y	0.07
BA555	A	2	W	2	W	2	Y	0.10
BA556	A	2	W	2	W	2	Y	0.10
BA557	A	2	W	2	W	2	Y	0.25
BA558	A	2	W	2	W	2	Y	0.10
BA559	A	2	W	2	W	2	Y	0.18
BA560	A	2	W	2	W	2	Y	0.12
BA564	A	2	W	2	W	2	Y	0.18
BA566	B	2	W	2	W	2	Y	0.28
BA57	B	2	Z	2	Z	2	Z	0.27
BA572	B	2	W	2	W	2	Y	0.43
BA573	A	2	W	2	W	2	Y	0.17
BA574	B	2	W	2	W	2	Y	0.54
BA576	A	2	W	2	W	2	Y	0.06
BA577	A	2	Z	2	Z	2	Z	0.03
BA62	A	2	Z	2	Z	2	Z	0.07
BA63	B	2	Z	2	Z	2	Z	0.30
BA65	B	2	Z	2	Z	2	Z	0.28
BA67	C	2	Z	2	Z	2	Z	1.79
BA71	B	2	Z	2	Z	2	Z	0.97
BA72	A	2	Z	2	Z	2	Z	0.11
BA77	A	2	Z	2	Z	2	Z	0.02
BA80	A	2	Z	2	Z	2	Z	0.19
BA81	A	2	Z	2	Z	2	Z	0.05
BA82	B	2	Z	2	Z	2	Z	1.21
BA87	A	2	Z		Z	2	Z	0.18
BA88	B	2	Z		Z	2	Z	1.44
BA91	A	2	Z	2	Z	2	Z	0.11
BA93	A	2	Z	2	Z	2	Z	0.23

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
BA94	B	2	Z		Z	2	Z	0.27
BA95	B	2	Z		Z	2	Z	0.88
BG10	B	2	Z	2	Z	2	Z	0.67
BG12	A	2	Z	2	Z	2	Z	0.18
BG14	A	2	Z	2	Z	2	Z	0.17
BG16	A	2	Z	2	Z	2	Z	0.17
BG19	B	2	Z	2	Z	2	Z	0.85
BG2	B	2	Z	2	Z	2	Z	0.89
BG31	A	2	Z	2	Z	2	Z	0.10
BG32	A	2	Z	2	Z	2	Z	0.04
BG35	B	2	Z		Z	2	Z	0.32
BG39	A	2	X	2	X	2	Y	0.12
BG40	B	2	X	2	X	2	Y	0.35
BG41	A	2	X	2	X	2	Y	0.09
BG44	A	2	Z	2	Z	2	Z	0.13
BG47	B	2	X		Z	2	Y	0.69
BG49	B	2	X		Z	2	Y	1.92
BG5	A	2	Z		Z	2	Z	0.20
BG7	B	2	Z	2	Z	2	Z	0.56
BG8	B	2	Z		Z	2	Z	0.58
DJ13	A	2	Z	2	Z	2	Z	0.21
DJ14	A	2	Z	2	Z	2	Z	0.13
DJ15	A	2	Z	2	Z	2	Z	0.22
DJ22	A	2	Z		Z	2	Z	0.08
DJ25	A	2	Z	2	Z	2	Z	0.13
DJ27	A	2	Z		Z	2	Z	0.24
DJ28	B	2	Z		Z	2	Z	0.45
DJ3	A	2	Z	2	Z	2	Z	0.20
JW2110	A	2	W	2	W	2	Y	0.16
JW2111	A	2	W	2	W	2	Y	0.05
JW2112	A	2	W	2	W	2	Y	0.06
JW2113	A	2	Z	2	Z	2	Z	0.03
JW2115	A	2	W	2	W	2	Y	0.12
JW2116A	A	2	W	2	W	2	Y	0.28
JW2116B	B	2	W	2	W	2	Y	0.38
JW2117	A	2	W	2	W	2	Y	0.10
JW2119	A	2	Z	2	Z	2	Z	0.07
JW2120	A	2	Z	2	Z	2	Z	0.14
JW2121	A	2	Z	2	Z	2	Z	0.04

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
JW2122	A	2	Z	2	Z	2	Z	0.22
JW2123	A	2	Z	2	Z	2	Z	0.15
JW2124	A	2	Z	2	Z	2	Z	0.03
JW2126	B	2	Z	2	Z	2	Z	0.47
JW2127	B	2	Z	2	Z	2	Z	0.29
JW2128	A	2	Z	2	Z	2	Z	0.22
JW2129	A	2	Z	2	Z	2	Z	0.25
JW2130	A	2	Z	2	Z	2	Z	0.17
JW2132	A	2	Z	2	Z	2	Z	0.03
JW2134	A	2	Z		Z	2	Z	0.02
JW2135	A	2	Z	2	Z	2	Z	0.13
JW2136	A	2	Z		Z	2	Z	0.07
JW2137	B	2	Z		Z	2	Z	0.40
JW2138	A	2	Z		Z	2	Z	0.15
JW2140	A	2	Z		Z	2	Z	0.16
JW59	A	2	Z	2	Z	2	Z	0.24
JW60	A	2	Z	2	Z	2	Z	0.09
JW61	B	2	Z	2	Z	2	Z	0.75
JW62	A	2	Z	2	Z	2	Z	0.12
JW63	A	2	Z	2	Z	2	Z	0.13
JW64	B	2	Z	2	Z	2	Z	0.37
JW65	B	2	Z	2	Z	2	Z	0.30
JW66	B	2	Z	2	Z	2	Z	1.30
JW67	A	2	Z	2	Z	2	Z	0.17
JW68	A	2	Z	2	Z	2	Z	0.03
JW69	A	2	Z	2	Z	2	Z	0.22
JW70	A	2	Z	2	Z	2	Z	0.16
JW71	B	2	Z	2	Z	2	Z	0.93
JW72	B	2	Z	2	Z	2	Z	0.44
JW74	B	2	Z	2	Z	2	Z	0.56
JW75	B	2	Z	2	Z	2	Z	0.32
JW78	B	2	Z	2	Z	2	Z	0.83
JW79	B	2	Z	2	Z	2	Z	0.49
JW80	A	2	Z	2	Z	2	Z	0.08
JW81	B	2	Z	2	Z	2	Z	0.97
JW82	B	2	Z	2	Z	2	Z	0.44
ML10	B	2	Z	2	Z	2	Z	0.77
ML1001	A	2	Z	2	Z	2	Z	0.02
ML1002A	A	2	Z	2	Z	2	Z	0.04

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML1002B	A	2	Z	2	Z	2	Z	0.12
ML1009	A	2	Z	2	Z	2	Z	0.21
ML101	B	2	X	2	X	2	Y	0.36
ML1010	A	2	Z	2	Z	2	Z	0.18
ML1016	B	2	Z	2	Z	2	Z	1.01
ML103	B	2	X	2	X	2	Y	0.75
ML104	B	2	X	2	X	2	Y	1.19
ML105	B	2	Z	2	Z	2	Z	1.46
ML106	A	2	Z	2	Z	2	Z	0.13
ML108	B	2	Z	2	Z	2	Z	0.43
ML109	A	2	Z	2	Z	2	Z	0.16
ML111	A	2	Z	2	Z	2	Z	0.15
ML112	A	2	Z	2	Z	2	Z	0.19
ML114	B	2	Z	2	Z	2	Z	0.68
ML115	A	2	Z	2	Z	2	Z	0.18
ML116	A	2	Z	2	Z	2	Z	0.16
ML119	B	2	Z	2	Z	2	Z	0.34
ML12	A	2	Z	2	Z	2	Z	0.15
ML120	B	2	Z	2	Z	2	Z	0.52
ML121	B	2	Z	2	Z	2	Z	0.92
ML123	B	2	Z	2	Z	2	Z	0.91
ML124	A	2	Z	2	Z	2	Z	0.24
ML126	A	2	X	2	X	2	Y	0.17
ML13	A	2	Z	2	Z	2	Z	0.12
ML1300	B	2	Z	2	Z	2	Z	1.31
ML1304	A	2	Z	2	Z	2	Z	0.08
ML1307	A	2	Z	2	Z	2	Z	0.06
ML1308	A	2	Z	2	Z	2	Z	0.19
ML1310	B	2	Z	2	Z	2	Z	0.38
ML135	A	2	Z	2	Z	2	Z	0.08
ML136	A	2	Z	2	Z	2	Z	0.04
ML14	A	2	Z	2	Z	2	Z	0.25
ML140	A	2	Z	2	Z	2	Z	0.05
ML141	A	2	Z	2	Z	2	Z	0.04
ML145	B	2	Z	2	Z	2	Z	0.82
ML146	B	2	Z	2	Z	2	Z	1.69
ML148	B	2	Z	2	Z	2	Z	0.52
ML15	B	2	Z	2	Z	2	Z	0.28
ML150	B	2	Z	2	Z	2	Z	0.49

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML164	B	2	Z	2	Z	2	Z	0.57
ML166	A	2	Z	2	Z	2	Z	0.23
ML17	A	2	Z	2	Z	2	Z	0.09
ML172	B	2	Z	2	Z	2	Z	0.30
ML173	B	2	Z	2	Z	2	Z	0.32
ML175	B	2	Z	2	Z	2	Z	0.30
ML177	B	2	Z	2	Z	2	Z	0.37
ML178	B	2	Z	2	Z	2	Z	1.02
ML18	B	2	Z	2	Z	2	Z	0.33
ML180	A	2	Z	2	Z	2	Z	0.11
ML181A	C	2	Z	2	Z	2	Z	1.60
ML19	A	2	Z	2	Z	2	Z	0.07
ML20	A	2	Z		Z	2	Z	0.04
ML2000	C	2	Z	2	Z	2	Z	0.76
ML2002	A	2	Z	2	Z	2	Z	0.14
ML2004	A	2	Z	2	Z	2	Z	0.08
ML2005	A	2	Z	2	Z	2	Z	0.10
ML2006	A	2	Z	2	Z	2	Z	0.14
ML2010	A	2	Z	2	Z	2	Z	0.10
ML2015	A	2	Z	2	Z	2	Z	0.03
ML2018	B	2	Z	2	Z	2	Z	0.40
ML2023	A	2	Z	2	Z	2	Z	0.02
ML2024	A	2	Z	2	Z	2	Z	0.09
ML2028	A	2	Z	2	Z	2	Z	0.02
ML2030	A	2	Z	2	Z	2	Z	0.07
ML2031	B	2	Z	2	Z	2	Z	0.39
ML2035	A	2	Z	2	Z	2	Z	0.11
ML2036	A	2	Z	2	Z	2	Z	0.07
ML2037	A	2	Z	2	Z	2	Z	0.07
ML2038	A	2	Z	2	Z	2	Z	0.16
ML2042	A	2	Z	2	Z	2	Z	0.03
ML2043	A	2	Z	2	Z	2	Z	0.12
ML2044	A	2	Z	2	Z	2	Z	0.02
ML2045	A	2	Z	2	Z	2	Z	0.08
ML2047	B	2	Z	2	Z	2	Z	0.41
ML2048	B	2	Z	2	Z	2	Z	0.84
ML2049	A	2	Z	2	Z	2	Z	0.21
ML2050	A	2	Z	2	Z	2	Z	0.09
ML2051	A	2	Z	2	Z	2	Z	0.06

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML2052	A	2	Z	2	Z	2	Z	0.11
ML2054	B	2	Z	2	Z	2	Z	1.05
ML206	A	2	X	2	X	2	Y	0.05
ML2060	B	2	Z	2	Z	2	Z	0.33
ML2061	B	2	Z	2	Z	2	Z	0.31
ML2063	A	2	Z	2	Z	2	Z	0.16
ML2067	A	2	Z	2	Z	2	Z	0.19
ML207	A	2	X	2	X	2	Y	0.06
ML2070	A	2	Z	2	Z	2	Z	0.05
ML2075	A	2	Z	2	Z	2	Z	0.04
ML208	A	2	X	2	X	2	Y	0.06
ML2081	A	2	Z		Z	2	Z	0.09
ML2085	A	2	Z		Z	2	Z	0.13
ML209	B	2	X	2	X	2	Y	0.47
ML2093	A	2	Z		Z	2	Z	0.05
ML2095	A	2	Z		Z	2	Z	0.12
ML21	A	2	Z		Z	2	Z	0.23
ML214	B	2	Z	2	Z	2	Z	0.82
ML231	A	2	Z	2	Z	2	Z	0.23
ML233	C	2	Z	2	Z	2	Z	0.28
ML234	A	2	Z	2	Z	2	Z	0.04
ML238	A	2	Z	2	Z	2	Z	0.07
ML24	A	2	Z	2	Z	2	Z	0.17
ML25	A	2	Z	2	Z	2	Z	0.07
ML250	B	2	Z		Z	2	Z	1.73
ML251	B	2	Z		Z	2	Z	0.46
ML26	B	2	Z	2	Z	2	Z	0.35
ML260	B	2	Z		Z	2	Z	2.07
ML263	A	2	Z	2	Z	2	Z	0.04
ML264	C	2	Z	2	Z	2	Z	0.60
ML27	A	2	Z	2	Z	2	Z	0.10
ML274	A	2	Z	2	Z	2	Z	0.03
ML283	B	2	Z	2	Z	2	Z	1.07
ML286	A	2	Z	2	Z	2	Z	0.03
ML287	A	2	Z	2	Z	2	Z	0.08
ML288	C	2	Z	2	Z	2	Z	0.13
ML29	A	2	Z	2	Z	2	Z	0.03

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML293	C	2	Z	2	Z	2	Z	1.94
ML299	C	2	Z	2	Z	2	Z	2.27
ML3	B	2	Z	2	Z	2	Z	0.49
ML300	C	2	Z	2	Z	2	Z	3.63
ML301	A	2	Z	2	Z	2	Z	0.24
ML302	C	2	Z	2	Z	2	Z	0.62
ML303	A	2	Z	2	Z	2	Z	0.17
ML304	A	2	Z	2	Z	2	Z	0.24
ML305	A	2	Z	2	Z	2	Z	0.02
ML306	A	2	Z	2	Z	2	Z	0.07
ML307	B	2	Z	2	Z	2	Z	0.49
ML308	A	2	Z	2	Z	2	Z	0.18
ML309	A	2	Z	2	Z	2	Z	0.14
ML310	A	2	Z	2	Z	2	Z	0.10
ML312	B	2	Z	2	Z	2	Z	0.70
ML315	A	2	Z	2	Z	2	Z	0.09
ML317	A	2	Z	2	Z	2	Z	0.08
ML318	C	2	Z	2	Z	2	Z	0.21
ML320	B	2	Z	2	Z	2	Z	0.44
ML322	C	2	Z	2	Z	2	Z	1.22
ML323	C	2	Z	2	Z	2	Z	0.29
ML324	C	2	Z	2	Z	2	Z	0.06
ML327	C	2	Z	2	Z	2	Z	1.36
ML328	C	2	Z	2	Z	2	Z	1.39
ML329	A	2	Z	2	Z	2	Z	0.09
ML330	A	2	Z	2	Z	2	Z	0.10
ML336	A	2	Z	2	Z	2	Z	0.06
ML337	A	2	Z	2	Z	2	Z	0.04
ML338	A	2	Z	2	Z	2	Z	0.11
ML340	B	2	Z	2	Z	2	Z	0.48
ML343	B	2	Z	2	Z	2	Z	0.27
ML344	A	2	Z	2	Z	2	Z	0.14
ML348	A	2	Z		Z	2	Z	0.09
ML353	A	2	Z	2	Z	2	Z	0.06
ML354	B	2	Z	2	Z	2	Z	0.97
ML355	B	2	Z	2	Z	2	Z	1.69
ML358	A	2	Z	2	Z	2	Z	0.12

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML359	A	2	Z	2	Z	2	Z	0.07
ML36	A	2	Z	2	Z	2	Z	0.08
ML360	B	2	Z	2	Z	2	Z	0.50
ML37	B	2	Z	2	Z	2	Z	0.28
ML370	A	2	Z	2	Z	2	Z	0.11
ML372	A	2	Z		Z	2	Z	0.05
ML373	A	2	Z	2	Z	2	Z	0.04
ML374	A	2	Z		Z	2	Z	0.04
ML375	C	2	Z		Z	2	Z	0.07
ML377	A	2	Z	2	Z	2	Z	0.14
ML378	A	2	Z	2	Z	2	Z	0.02
ML379	C	2	Z	2	Z	2	Z	0.18
ML380	A	2	Z	2	Z	2	Z	0.04
ML381	A	2	Z	2	Z	2	Z	0.05
ML382	B	2	Z	2	Z	2	Z	0.62
ML383	B	2	Z	2	Z	2	Z	1.34
ML384	B	2	Z	2	Z	2	Z	0.48
ML385	B	2	Z	2	Z	2	Z	0.39
ML386	B	2	Z	2	Z	2	Z	0.31
ML387	B	2	Z	2	Z	2	Z	0.29
ML388	A	2	Z	2	Z	2	Z	0.10
ML39	A	2	Z	2	Z	2	Z	0.26
ML390	B	2	Z	2	Z	2	Z	0.51
ML391	A	2	Z	2	Z	2	Z	0.19
ML392	A	2	Z	2	Z	2	Z	0.08
ML394	A	2	Z	2	Z	2	Z	0.08
ML395	A	2	Z	2	Z	2	Z	0.07
ML396	A	2	Z	2	Z	2	Z	0.11
ML4	B	2	Z	2	Z	2	Z	0.35
ML40	B	2	Z	2	Z	2	Z	0.32
ML401	B	2	Z	2	Z	2	Z	0.27
ML4012	A	2	Z	2	Z	2	Z	0.02
ML4013	A	2	Z	2	Z	2	Z	0.03
ML4017	A	2	Z	2	Z	2	Z	0.01
ML4018	B	2	Z	2	Z	2	Z	0.35
ML4019	A	2	Z	2	Z	2	Z	0.03
ML4022	A	2	Z	2	Z	2	Z	0.03
ML4023	A	2	Z	2	Z	2	Z	0.02
ML4024	A	2	Z	2	Z	2	Z	0.07

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML4029	A	2	Z	2	Z	2	Z	0.02
ML4030	B	2	Z	2	Z	2	Z	0.38
ML4034	A	2	Z	2	Z	2	Z	0.02
ML4035	A	2	Z	2	Z	2	Z	0.09
ML4036	A	2	Z	2	Z	2	Z	0.03
ML4037	A	2	Z	2	Z	2	Z	0.03
ML4039	A	2	Z	2	Z	2	Z	0.04
ML404	A	2	Z	2	Z	2	Z	0.08
ML4041	A	2	Z	2	Z	2	Z	0.03
ML4043	A	2	Z	2	Z	2	Z	0.07
ML4045	B	2	Z	2	Z	2	Z	0.61
ML4046	A	2	Z	2	Z	2	Z	0.01
ML4048	C	2	Z	2	Z	2	Z	0.15
ML405	A	2	Z	2	Z	2	Z	0.03
ML406	A	2	Z	2	Z	2	Z	0.17
ML410	B	2	Z	2	Z	2	Z	1.08
ML415	B	2	Z	2	Z	2	Z	0.83
ML416	A	2	Z	2	Z	2	Z	0.05
ML417	A	2	Z		Z	2	Z	0.16
ML418	A	2	Z	2	Z	2	Z	0.13
ML421	B	2	Z	2	Z	2	Z	0.53
ML425	A	2	Z	2	Z	2	Z	0.22
ML43	A	2	Z	2	Z	2	Z	0.12
ML432	C	2	Z		Z	2	Z	0.21
ML434	B	2	Z		Z	2	Z	0.49
ML436	B	2	Z		Z	2	Z	0.43
ML443	A	2	Z	2	Z	2	Z	0.11
ML461	A	2	Z		Z	2	Z	0.24
ML467	A	2	Z	2	Z	2	Z	0.05
ML469	A	2	Z		Z	2	Z	0.06
ML477	A	2	Z		Z	2	Z	0.25
ML479	A	2	Z	2	Z	2	Z	0.11
ML48	A	2	Z	2	Z	2	Z	0.09
ML481	A	2	Z		Z	2	Z	0.07
ML482	A	2	Z	2	Z	2	Z	0.11
ML486	A	2	Z	2	Z	2	Z	0.08
ML488	C	2	Z		Z	2	Z	0.27
ML491	A	2	Z	2	Z	2	Z	0.04
ML492	B	2	Z	2	Z	2	Z	0.67

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML496	B	2	Z	2	Z	2	Z	0.37
ML499	B	2	Z	2	Z	2	Z	0.56
ML50	A	2	Z	2	Z	2	Z	0.23
ML500	A	2	Z	2	Z	2	Z	0.05
ML502	A	2	Z	2	Z	2	Z	0.08
ML504	B	2	Z	2	Z	2	Z	0.47
ML505	A	2	Z	2	Z	2	Z	0.05
ML506	B	2	Z	2	Z	2	Z	0.31
ML508	A	2	Z	2	Z	2	Z	0.09
ML509	A	2	Z	2	Z	2	Z	0.12
ML51	A	2	Z	2	Z	2	Z	0.08
ML510	A	2	Z	2	Z	2	Z	0.17
ML513	B	2	Z	2	Z	2	Z	0.49
ML514	B	2	Z	2	Z	2	Z	0.87
ML516	B	2	Z	2	Z	2	Z	0.60
ML518	B	2	Z	2	Z	2	Z	0.33
ML520	C	2	Z		Z	2	Z	0.11
ML524A	B	2	Z	2	Z	2	Z	0.39
ML526	A	2	Z	2	Z	2	Z	0.08
ML527	B	2	Z	2	Z	2	Z	0.61
ML535	A	2	Z	2	Z	2	Z	0.05
ML537	C	2	Z	2	Z	2	Z	1.16
ML543	B	2	Z	2	Z	2	Z	0.67
ML546	B	2	Z	2	Z	2	Z	0.55
ML547	A	2	Z	2	Z	2	Z	0.03
ML548	B	2	Z	2	Z	2	Z	0.31
ML549	A	2	Z	2	Z	2	Z	0.16
ML551	B	2	Z	2	Z	2	Z	0.78
ML552	B	2	Z	2	Z	2	Z	0.85
ML553	A	2	Z	2	Z	2	Z	0.09
ML556	C	2	Z	2	Z	2	Z	1.50
ML566	A	2	Z	2	Z	2	Z	0.03
ML577	B	2	Z	2	Z	2	Z	0.30
ML578	A	2	Z	2	Z	2	Z	0.07
ML58	A	2	Z	2	Z	2	Z	0.04
ML580	A	2	Z	2	Z	2	Z	0.15
ML583	A	2	Z	2	Z	2	Z	0.05
ML584	A	2	Z	2	Z	2	Z	0.10
ML589	C	2	Z	2	Z	2	Z	0.06

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
ML591	B	2	Z		Z	2	Z	0.42
ML592	B	2	Z	2	Z	2	Z	0.92
ML60	A	2	Z	2	Z	2	Z	0.16
ML62	A	2	Z	2	Z	2	Z	0.12
ML63	A	2	Z	2	Z	2	Z	0.10
ML64	B	2	Z	2	Z	2	Z	0.40
ML66	C	2	Z	2	Z	2	Z	0.07
ML67	A	2	Z	2	Z	2	Z	0.04
ML68	A	2	Z	2	Z	2	Z	0.14
ML71	A	2	Z	2	Z	2	Z	0.06
ML72	A	2	Z	2	Z	2	Z	0.05
ML73	A	2	Z	2	Z	2	Z	0.23
ML76	A	2	Z	2	Z	2	Z	0.14
ML78	C	2	Z	2	Z	2	Z	0.10
ML79	C	2	Z	2	Z	2	Z	0.08
ML8	A	2	Z	2	Z	2	Z	0.17
ML84	C	2	X	2	X	2	Y	0.10
ML85	C	2	X	2	X	2	Y	0.34
ML88	B	2	Z	2	Z	2	Z	0.49
ML89	A	2	Z	2	Z	2	Z	0.03
ML9	C	2	Z		Z	2	Z	1.29
ML90	A	2	Z	2	Z	2	Z	0.12
ML91	B	2	Z	2	Z	2	Z	0.70
ML92	A	2	Z	2	Z	2	Z	0.06
ML94	B	2	X		Z	2	Y	0.37
ML96	A	2	X		Z	2	Y	0.24
ML97	A	2	X		Z	2	Y	0.08
ML99	B	2	X	2	X	2	Y	0.45
PA1	A	2	Z	2	Z	2	Z	0.02
PA10	B	2	Z	2	Z	2	Z	0.46
PA11	A	2	Z	2	Z	2	Z	0.02
PA13	A	2	Z	2	Z	2	Z	0.09
PA14	C	2	Z	2	Z	2	Z	0.07
PA15	A	2	Z	2	Z	2	Z	0.15
PA16	A	2	Z	2	Z	2	Z	0.04
PA17	A	2	Z	2	Z	2	Z	0.19
PA18	B	2	Z	2	Z	2	Z	0.31
PA2	A	2	Z	2	Z	2	Z	0.07
PA3	A	2	Z	2	Z	2	Z	0.05

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
PA30	A	2	Z	2	Z	2	Z	0.05
PA38	A	2	Z	2	Z	2	Z	0.04
PA39	A	2	Z	2	Z	2	Z	0.03
PA4	A	2	Z	2	Z	2	Z	0.03
PA40	A	2	Z	2	Z	2	Z	0.15
PA7	A	2	Z	2	Z	2	Z	0.09
PK1	A	2	Z	2	Z	2	Z	0.05
PK10	B	2	Z	2	Z	2	Z	1.49
PK11	B	2	Z	2	Z	2	Z	0.27
PK13	B	2	Z	2	Z	2	Z	0.86
PK14	A	2	Z	2	Z	2	Z	0.05
PK15	A	2	Z	2	Z	2	Z	0.12
PK16	A	2	Z	2	Z	2	Z	0.18
PK17	A	2	Z	2	Z	2	Z	0.26
PK18	A	2	Z	2	Z	2	Z	0.12
PK19	A	2	Z	2	Z	2	Z	0.12
PK20	B	2	Z	2	Z	2	Z	0.40
PK21	A	2	Z	2	Z	2	Z	0.05
PK22	A	2	Z	2	Z	2	Z	0.07
PK23	A	2	Z	2	Z	2	Z	0.13
PK24	A	2	Z	2	Z	2	Z	0.04
PK25	B	2	Z	2	Z	2	Z	0.85
PK26	A	2	Z	2	Z	2	Z	0.06
PK27A	A	2	Z	2	Z	2	Z	0.05
PK27AA	A	2	Z	2	Z	2	Z	0.11
PK28	A	2	Z	2	Z	2	Z	0.05
PK31	A	2	Z	2	Z	2	Z	0.11
PK4	A	2	Z	2	Z	2	Z	0.03
PK5	A	2	Z	2	Z	2	Z	0.17
PK6	A	2	Z	2	Z	2	Z	0.22
PK8	A	2	Z	2	Z	2	Z	0.18
PK9	A	2	Z	2	Z	2	Z	0.03
PUB003	B	2	Z		Z	2	Z	1.00
PUB009	B	2	Z	2	Z	2	Z	0.53
PUB010	A	2	Z	2	Z	2	Z	0.03
PUB011	A	2	Z	2	Z	2	Z	0.04
PUB012	A	2	Z		Z	2	Z	0.05
PUB013	C	2	Z	2	Z	2	Z	0.05
PUB017	A	2	Z	2	Z	2	Z	0.04

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
PUB018	A	2	Z	2	Z	2	Z	0.05
PUB019	A	2	Z	2	Z	2	Z	0.02
SS01	C	2	Z	2	Z	2	Z	0.21
SS05	A	2	Z	2	Z	2	Z	0.07
SS1000	A	2	Z	2	Z	2	Z	0.03
SS1002	C	2	Z	2	Z	2	Z	2.13
SS1003	C	2	Z	2	Z	2	Z	0.06
SS1004	C	2	Z	2	Z	2	Z	0.75
SS102	A	2	Z	2	Z	2	Z	0.03
SS103	A	2	Z	2	Z	2	Z	0.04
SS106	A	2	Z	2	Z	2	Z	0.18
SS107	A	2	Z	2	Z	2	Z	0.12
SS111	A	2	Z	2	Z	2	Z	0.25
SS113	A	2	Z	2	Z	2	Z	0.24
SS115	A	2	Z	2	Z	2	Z	0.13
SS118	B	2	Z	2	Z	2	Z	0.83
SS12	A	2	Z	2	Z	2	Z	0.03
SS120	A	2	Z	2	Z	2	Z	0.04
SS121	B	2	Z	2	Z	2	Z	0.43
SS123	A	2	Z	2	Z	2	Z	0.05
SS126	A	2	Z	2	Z	2	Z	0.13
SS131	A	2	Z	2	Z	2	Z	0.05
SS132	A	2	Z	2	Z	2	Z	0.07
SS133	A	2	Z	2	Z	2	Z	0.03
SS135	B	2	Z	2	Z	2	Z	1.38
SS136	A	2	Z	2	Z	2	Z	0.07
SS140	B	2	Z		Z	2	Z	0.41
SS141	A	2	Z	2	Z	2	Z	0.04
SS150	A	2	Z	2	Z	2	Z	0.05
SS1501	B	2	Z	2	Z	2	Z	0.28
SS1507	B	2	Z	2	Z	2	Z	0.49
SS151	A	2	Z		Z	2	Z	0.06
SS164	A	2	Z		Z	2	Z	0.19
SS165	B	2	Z		Z	2	Z	0.32
SS17	C	2	Z	2	Z	2	Z	0.05
SS170	A	2	Z	2	Z	2	Z	0.06
SS171	A	2	Z	2	Z	2	Z	0.06
SS173	B	2	Z		Z	2	Z	0.42
SS174	A	2	Z		Z	2	Z	0.12

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS176	A	2	Z	2	Z	2	Z	0.08
SS177	C	2	Z	2	Z	2	Z	0.06
SS180	A	2	Z	2	Z	2	Z	0.08
SS186	A	2	Z	2	Z	2	Z	0.19
SS189	B	2	Z	2	Z	2	Z	1.47
SS192	A	2	Z	2	Z	2	Z	0.25
SS193	A	2	Z	2	Z	2	Z	0.08
SS194	A	2	Z	2	Z	2	Z	0.11
SS195	B	2	Z	2	Z	2	Z	1.03
SS197	B	2	Z	2	Z	2	Z	0.28
SS199	A	2	Z	2	Z	2	Z	0.36
SS200	A	2	Z	2	Z	2	Z	0.08
SS201	A	2	Z	2	Z	2	Z	0.18
SS202	A	2	Z	2	Z	2	Z	0.19
SS203	A	2	Z	2	Z	2	Z	0.24
SS207	A	2	Z	2	Z	2	Z	0.04
SS210	A	2	Z	2	Z	2	Z	0.04
SS211	A	2	Z	2	Z	2	Z	0.07
SS212	A	2	Z	2	Z	2	Z	0.08
SS215	A	2	Z	2	Z	2	Z	0.04
SS216	C	2	Z	2	Z	2	Z	0.27
SS22	A	2	Z	2	Z	2	Z	0.15
SS220	A	2	Z	2	Z	2	Z	0.08
SS221	A	2	Z	2	Z	2	Z	0.23
SS223	A	2	Z	2	Z	2	Z	0.11
SS224	B	2	Z	2	Z	2	Z	0.87
SS225	B	2	Z	2	Z	2	Z	0.28
SS226	A	2	Z	2	Z	2	Z	0.18
SS227	A	2	Z	2	Z	2	Z	0.05
SS228	C	2	Z	2	Z	2	Z	0.11
SS229	C	2	Z	2	Z	2	Z	0.20
SS23	B	2	Z	2	Z	2	Z	0.26
SS231	A	2	Z	2	Z	2	Z	0.03
SS232	A	2	Z	2	Z	2	Z	0.06
SS233	C	2	Z	2	Z	2	Z	0.05
SS234	A	2	Z	2	Z	2	Z	0.11
SS236	A	2	Z		Z	2	Z	0.07
SS238	B	2	Z	2	Z	2	Z	0.57
SS24	A	2	Z	2	Z	2	Z	0.24

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS240	B	2	Z	2	Z	2	Z	0.38
SS241	A	2	Z	2	Z	2	Z	0.04
SS242	B	2	Z	2	Z	2	Z	0.69
SS243	B	2	Z	2	Z	2	Z	0.43
SS244	A	2	Z		Z	2	Z	0.24
SS247	B	2	Z	2	Z	2	Z	0.50
SS248	A	2	Z	2	Z	2	Z	0.14
SS250	A	2	Z	2	Z	2	Z	0.05
SS251	A	2	Z	2	Z	2	Z	0.19
SS252	A	2	Z	2	Z	2	Z	0.26
SS254	A	2	Z	2	Z	2	Z	0.08
SS255	A	2	Z	2	Z	2	Z	0.07
SS256	A	2	Z	2	Z	2	Z	0.19
SS258	A	2	Z	2	Z	2	Z	0.11
SS259	A	2	Z	2	Z	2	Z	0.11
SS272	B	2	Z	2	Z	2	Z	0.77
SS273	B	2	Z	2	Z	2	Z	0.52
SS274	A	2	Z	2	Z	2	Z	0.18
SS275	B	2	Z	2	Z	2	Z	0.70
SS276	B	2	Z	2	Z	2	Z	1.71
SS280	A	2	Z	2	Z	2	Z	0.07
SS281	C	2	Z	2	Z	2	Z	0.07
SS282	C	2	Z	2	Z	2	Z	0.07
SS285	A	2	Z	2	Z	2	Z	0.04
SS286	B	2	Z	2	Z	2	Z	0.50
SS287	A	2	Z	2	Z	2	Z	0.07
SS288	B	2	Z	2	Z	2	Z	0.43
SS289	A	2	Z	2	Z	2	Z	0.15
SS290	A	2	Z	2	Z	2	Z	0.14
SS293	B	2	Z	2	Z	2	Z	1.08
SS295	B	2	Z	2	Z	2	Z	1.98
SS299	A	2	Z	2	Z	2	Z	0.12
SS300	B	2	Z	2	Z	2	Z	0.79
SS301	A	2	Z	2	Z	2	Z	0.04
SS303	A	2	Z	2	Z	2	Z	0.05
SS305	B	2	Z	2	Z	2	Z	2.15
SS306	B	2	Z	2	Z	2	Z	0.95
SS307	B	2	Z	2	Z	2	Z	0.41
SS308	B	2	Z	2	Z	2	Z	0.43

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS309	A	2	Z	2	Z	2	Z	0.06
SS310	A	2	Z	2	Z	2	Z	0.06
SS312	B	2	Z	2	Z	2	Z	0.86
SS315	A	2	Z	2	Z	2	Z	0.25
SS318	A	2	Z	2	Z	2	Z	0.17
SS319	B	2	Z	2	Z	2	Z	0.92
SS320	B	2	Z	2	Z	2	Z	0.45
SS321	B	2	Z	2	Z	2	Z	0.99
SS322	B	2	Z	2	Z	2	Z	0.27
SS324	B	2	Z	2	Z	2	Z	0.38
SS325	B	2	Z	2	Z	2	Z	1.26
SS327	B	2	Z	2	Z	2	Z	0.65
SS328	B	2	Z	2	Z	2	Z	0.36
SS337	B	2	Z	2	Z	2	Z	0.43
SS338	B	2		2		2		0.44
SS339	B	2	Z	2	Z	2	Z	0.28
SS345	B	2	Z		Z	2	Z	0.26
SS346	A	2	Z		Z	2	Z	0.20
SS350	B	2	Z		Z	2	Z	0.50
SS351	B	2	Z		Z	2	Z	0.50
SS352	A	2	Z		Z	2	Z	0.14
SS353	A	2	Z		Z	2	Z	0.04
SS354	A	2	Z		Z	2	Z	0.07
SS358	A	2	Z	2	Z	2	Z	0.17
SS359	A	2	Z	2	Z	2	Z	0.15
SS363	B	2	Z	2	Z	2	Z	0.31
SS364	A	2	Z	2	Z	2	Z	0.16
SS366	A	2	Z	2	Z	2	Z	0.07
SS367	B	2	Z	2	Z	2	Z	0.45
SS373	A	2	Z	2	Z	2	Z	0.15
SS374	A	2	Z	2	Z	2	Z	0.05
SS375	A	2	Z	2	Z	2	Z	0.22
SS376	A	2	Z	2	Z	2	Z	0.17
SS377	A	2	Z	2	Z	2	Z	0.22
SS379	B	2	Z	2	Z	2	Z	0.33
SS380	A	2	Z	2	Z	2	Z	0.06
SS382	A	2	Z	2	Z	2	Z	0.19
SS383	B	2	Z	2	Z	2	Z	0.55
SS384	A	2	Z	2	Z	2	Z	0.15

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS386	A	2	Z	2	Z	2	Z	0.11
SS389	B	2	Z	2	Z	2	Z	0.44
SS390	A	2	Z	2	Z	2	Z	0.08
SS396	A	2	Z	2	Z	2	Z	0.22
SS397	B	2	Z	2	Z	2	Z	0.64
SS415	A	2	Z	2	Z	2	Z	0.07
SS417	B	2	Z	2	Z	2	Z	0.81
SS418	B	2	Z	2	Z	2	Z	0.29
SS420	A	2	Z	2	Z	2	Z	0.14
SS421	C	2	Z	2	Z	2	Z	0.24
SS432	A	2	Z	2	Z	2	Z	0.24
SS436	A	2	Z	2	Z	2	Z	0.16
SS437	A	2	Z	2	Z	2	Z	0.21
SS48	B	2	X	2	X	2	Y	0.72
SS500	B	2	Z	2	Z	2	Z	0.45
SS501	B	2	Z	2	Z	2	Z	0.30
SS502	B	2	Z	2	Z	2	Z	0.56
SS503	B	2	Z	2	Z	2	Z	0.72
SS504	A	2	Z	2	Z	2	Z	0.17
SS505	B	2	Z	2	Z	2	Z	0.30
SS506	A	2	Z	2	Z	2	Z	0.05
SS507	B	2	Z	2	Z	2	Z	0.91
SS508	B	2	Z	2	Z	2	Z	0.84
SS509	A	2	Z	2	Z	2	Z	0.05
SS510	A	2	Z	2	Z	2	Z	0.17
SS514	A	2	Z	2	Z	2	Z	0.22
SS515	B	2	Z	2	Z	2	Z	1.19
SS517	A	2	Z	2	Z	2	Z	0.07
SS520	A	2	Z	2	Z	2	Z	0.10
SS522	A	2	Z	2	Z	2	Z	0.05
SS524	B	2	Z	2	Z	2	Z	0.29
SS525	B	2	Z	2	Z	2	Z	0.61
SS526	A	2	Z	2	Z	2	Z	0.06
SS527	A	2	Z	2	Z	2	Z	0.22
SS528	B	2	Z	2	Z	2	Z	0.73
SS529	A	2	Z	2	Z	2	Z	0.11
SS530	A	2	Z	2	Z	2	Z	0.09
SS531	A	2	Z	2	Z	2	Z	0.03
SS532	A	2	Z	2	Z	2	Z	0.10

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS533	B	2	Z	2	Z	2	Z	0.83
SS534	A	2	Z	2	Z	2	Z	0.07
SS535	A	2	Z	2	Z	2	Z	0.26
SS535A	C	2	Z		Z	2	Z	1.22
SS551	A	2	Z	2	Z	2	Z	0.10
SS554	A	2	Z	2	Z	2	Z	0.11
SS556	B	2	Z	2	Z	2	Z	0.43
SS557	A	2	Z	2	Z	2	Z	0.11
SS558	A	2	Z	2	Z	2	Z	0.08
SS562	C	2	Z	2	Z	2	Z	0.06
SS563	A	2	Z	2	Z	2	Z	0.06
SS564	A	2	Z	2	Z	2	Z	0.10
SS565	A	2	Z	2	Z	2	Z	0.04
SS566	A	2	Z	2	Z	2	Z	0.03
SS567	A	2	Z	2	Z	2	Z	0.08
SS568	B	2	Z	2	Z	2	Z	0.41
SS569	A	2	Z	2	Z	2	Z	0.05
SS573	A	2	Z	2	Z	2	Z	0.11
SS574	A	2	Z	2	Z	2	Z	0.07
SS575	A	2	Z	2	Z	2	Z	0.06
SS579	B	2	Z	2	Z	2	Z	0.32
SS580	A	2	Z	2	Z	2	Z	0.08
SS581	A	2	Z	2	Z	2	Z	0.03
SS582	A	2	Z		Z	2	Z	0.03
SS583	B	2	Z		Z	2	Z	0.85
SS584	A	2	Z	2	Z	2	Z	0.06
SS585	A	2	Z	2	Z	2	Z	0.05
SS588	A	2	Z	2	Z	2	Z	0.04
SS589	A	2	Z	2	Z	2	Z	0.05
SS59	C	2	X	2	X	2	Y	0.26
SS590	A	2	Z	2	Z	2	Z	0.06
SS591	A	2	Z	2	Z	2	Z	0.15
SS593	A	2	Z	2	Z	2	Z	0.14
SS600	A	2	Z	2	Z	2	Z	0.05
SS601	C	2	Z		Z	2	Z	0.14
SS602	A	2	Z	2	Z	2	Z	0.04
SS603	A	2	Z	2	Z	2	Z	0.08
SS605	A	2	Z	2	Z	2	Z	0.03
SS606	A	2	Z	2	Z	2	Z	0.12

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS607	A	2	Z	2	Z	2	Z	0.04
SS608	B	2	Z	2	Z	2	Z	0.30
SS613	B	2	Z	2	Z	2	Z	0.26
SS614	A	2	Z	2	Z	2	Z	0.08
SS62	A	2	Z	2	Z	2	Z	0.07
SS622	A	2	Z	2	Z	2	Z	0.07
SS627	A	2	Z	2	Z	2	Z	0.04
SS628	A	2	Z	2	Z	2	Z	0.22
SS63	C	2	X	2	X	2	Y	0.45
SS630	A	2	Z	2	Z	2	Z	0.11
SS631	A	2	Z	2	Z	2	Z	0.05
SS633	A	2	Z	2	Z	2	Z	0.06
SS634	B	2	Z		Z	2	Z	0.70
SS635	A	2	Z		Z	2	Z	0.04
SS639	A	2	Z		Z	2	Z	0.14
SS64	A	2	Z	2	Z	2	Z	0.08
SS640	A	2	Z	2	Z	2	Z	0.08
SS641	A	2	Z	2	Z	2	Z	0.19
SS648	A	2	Z	2	Z	2	Z	0.03
SS65	B	2	Z	2	Z	2	Z	0.62
SS656	A	2	Z	2	Z	2	Z	0.02
SS659	A	2	Z	2	Z	2	Z	0.07
SS66	A	2	Z	2	Z	2	Z	0.09
SS660	A	2	Z	2	Z	2	Z	0.04
SS662	A	2	Z	2	Z	2	Z	0.09
SS667	A	2	Z		Z	2	Z	0.12
SS668	A	2	Z	2	Z	2	Z	0.05
SS669	A	2	Z	2	Z	2	Z	0.05
SS67	B	2	Z		Z	2	Z	1.31
SS670	A	2	Z	2	Z	2	Z	0.23
SS671	A	2	Z	2	Z	2	Z	0.14
SS678	A	2	Z		Z	2	Z	0.07
SS690	A	2	Z	2	Z	2	Z	0.10
SS691	A	2	Z	2	Z	2	Z	0.10
SS695	B	2	Z	2	Z	2	Z	0.51
SS697	B	2	Z	2	Z	2	Z	0.65
SS701	A	2	Z	2	Z	2	Z	0.26
SS702	B	2	Z	2	Z	2	Z	0.34
SS706	A	2	Z	2	Z	2	Z	0.23

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS707	A	2	Z	2	Z	2	Z	0.08
SS71	A	2	X	2	X	2	Y	0.13
SS710	A	2	Z	2	Z	2	Z	0.19
SS711	B	2	Z	2	Z	2	Z	0.45
SS715	B	2	Z	2	Z	2	Z	0.49
SS725	A	2	Z	2	Z	2	Z	0.14
SS726	A	2	Z	2	Z	2	Z	0.14
SS727	A	2	Z	2	Z	2	Z	0.10
SS736	B	2	Z	2	Z	2	Z	0.77
SS739	B	2	Z	2	Z	2	Z	0.46
SS74	B	2	Z		Z	2	Z	0.26
SS75	B	2	Z		Z	2	Z	0.40
SS757	B	2	Z	2	Z	2	Z	0.31
SS76	A	2	Z	2	Z	2	Z	0.08
SS767	A	2	Z	2	Z	2	Z	0.19
SS770	B	2	Z	2	Z	2	Z	0.50
SS78	A	2	Z	2	Z	2	Z	0.03
SS788	B	2	Z	2	Z	2	Z	0.75
SS789	A	2	Z	2	Z	2	Z	0.08
SS79	A	2	Z	2	Z	2	Z	0.04
SS790	A	2	Z	2	Z	2	Z	0.13
SS792	A	2	Z	2	Z	2	Z	0.13
SS795	A	2	Z	2	Z	2	Z	0.09
SS80	C	2	Z	2	Z	2	Z	0.09
SS818	A	2	Z	2	Z	2	Z	0.02
SS819	A	2	Z	2	Z	2	Z	0.06
SS824	A	2	Z	2	Z	2	Z	0.09
SS83	B	2	Z	2	Z	2	Z	0.32
SS841	B	2	Z	2	Z	2	Z	0.47
SS844	A	2	Z	2	Z	2	Z	0.11
SS847	B	2	Z	2	Z	2	Z	0.38
SS852	A	2	Z	2	Z	2	Z	0.10
SS854	A	2	Z	2	Z	2	Z	0.13
SS862	A	2	Z	2	Z	2	Z	0.04
SS864	A	2	Z	2	Z	2	Z	0.09
SS865	B	2	Z		Z	2	Z	0.34
SS866	A	2	Z	2	Z	2	Z	0.16
SS868	A	2	Z	2	Z	2	Z	0.03
SS871	A	2	Z		Z	2	Z	0.17

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS881	B	2	Z	2	Z	2	Z	0.97
SS882	A	2	Z	2	Z	2	Z	0.03
SS883	A	2	Z	2	Z	2	Z	0.04
SS884	C	2	Z	2	Z	2	Z	0.12
SS886	A	2	Z	2	Z	2	Z	0.24
SS903	A	2	Z	2	Z	2	Z	0.05
SS904	B	2	Z	2	Z	2	Z	0.29
SS910	A	2	Z	2	Z	2	Z	0.03
SS912	A	2	Z	2	Z	2	Z	0.04
SS914	A	2	Z	2	Z	2	Z	0.08
SS920	A	2	Z	2	Z	2	Z	0.09
SS926	A	2	Z	2	Z	2	Z	0.09
SS927	A	2	Z	2	Z	2	Z	0.07
SS928	A	2	Z	2	Z	2	Z	0.05
SS929	A	2	Z	2	Z	2	Z	0.05
SS930	B	2	Z	2	Z	2	Z	0.35
SS931	A	2	Z	2	Z	2	Z	0.12
SS932	A	2	Z	2	Z	2	Z	0.14
SS933	A	2	Z	2	Z	2	Z	0.04
SS934	A	2	Z	2	Z	2	Z	0.06
SS935	A	2	Z	2	Z	2	Z	0.15
SS940	A	2	Z	2	Z	2	Z	0.10
SS941	A	2	Z	2	Z	2	Z	0.09
SS948	A	2	Z	2	Z	2	Z	0.05
SS949	A	2	Z	2	Z	2	Z	0.12
SS950	B	2	Z	2	Z	2	Z	0.38
SS951	A	2	Z	2	Z	2	Z	0.04
SS952	A	2	Z	2	Z	2	Z	0.08
SS954	A	2	Z	2	Z	2	Z	0.04
SS955	A	2	Z	2	Z	2	Z	0.05
SS957	A	2	Z	2	Z	2	Z	0.14
SS958	C	2	Z	2	Z	2	Z	0.34
SS964	B	2	W	2	W	2	Y	1.02
SS969	C	2	Z	2	Z	2	Z	0.08
SS973	A	2	Z	2	Z	2	Z	0.17
SS978	A	2	Z	2	Z	2	Z	0.22
SS979	A	2	Z	2	Z	2	Z	0.13
SS980	A	2	Z	2	Z	2	Z	0.08
SS983	A	2	Z	2	Z	2	Z	0.03

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
SS984	C	2	Z	2	Z	2	Z	0.17
SS988	A	2	Z	2	Z	2	Z	0.08
SS989	B	2	Z	2	Z	2	Z	2.22
SS990	C	2	Z	2	Z	2	Z	0.76
SS991	C	2	Z	2	Z	2	Z	0.85
SS993	C	2	Z	2	Z	2	Z	2.23
SS994	C	2	Z	2	Z	2	Z	0.15
SS996	C	2	Z	2	Z	2	Z	0.45
TR10	A	2	Z	2	Z	2	Z	0.03
TR100	B	2	Z	2	Z	2	Z	0.46
TR101	A	2	Z	2	Z	2	Z	0.21
TR102	A	2	Z	2	Z	2	Z	0.08
TR105	A	2	Z	2	Z	2	Z	0.06
TR106	B	2	Z	2	Z	2	Z	0.38
TR11	B	2	W	2	W	2	Y	1.02
TR12	B	2	W	2	W	2	Y	0.49
TR13	A	2	W	2	W	2	Y	0.05
TR14	A	2	W	2	W	2	Y	0.17
TR15	A	2	W	2	W	2	Y	0.17
TR16	A	2	W	2	W	2	Y	0.17
TR18	A	2	W	2	W	2	Y	0.10
TR2	B	2	W	2	W	2	Y	0.34
TR20	B	2	W	2	W	2	Y	0.08
TR21	B	2	W	2	W	2	Y	0.39
TR22	A	2	W	2	W	2	Y	0.14
TR23	A	2	W	2	W	2	Y	0.03
TR24	A	2	W	2	W	2	Y	0.07
TR25	A	2	W	2	W	2	Y	0.06
TR27	A	2	Z	2	Z	2	Z	0.05
TR28	A	2	W		Z	2	Y	0.22
TR29	A	2	W	2	W	2	Y	0.07
TR300	A	2	Z		Z	2	Z	0.06
TR301	A	2	Z		Z	2	Z	0.08
TR302	A	2	Z	2	Z	2	Z	0.23
TR303	A	2	Z	2	Z	2	Z	0.03
TR307	A	2	Z	2	Z	2	Z	0.11
TR308	B	2	Z	2	Z	2	Z	0.43
TR310	A	2	Z	2	Z	2	Z	0.06
TR32	A	2	W	2	W	2	Y	0.05

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
TR33	A	2	W	2	W	2	Y	0.04
TR34	A	2	W	2	W	2	Y	0.05
TR35	A	2	W	2	W	2	Y	0.07
TR36	A	2	W	2	W	2	Y	0.11
TR37	A	2	W	2	W	2	Y	0.07
TR38	A	2	W		Z	2	Y	0.15
TR39	A	2	W	2	W	2	Y	0.03
TR4	A	2	W	2	W	2	Y	0.03
TR41	A	2	W		Z	2	Y	0.50
TR42	A	2	W	2	W	2	Y	0.06
TR43	B	2	W		Z	2	Y	0.36
TR44	B	2	W	2	W	2	Y	0.40
TR50	A	2	Z	2	Z	2	Z	0.10
TR51	A	2	Z	2	Z	2	Z	0.18
TR52	B	2	Z	2	Z	2	Z	0.27
TR53	A	2	Z	2	Z	2	Z	0.08
TR54	B	2	Z	2	Z	2	Z	0.59
TR55	A	2	Z	2	Z	2	Z	0.06
TR56	A	2	Z	2	Z	2	Z	0.12
TR59	A	2	Z	2	Z	2	Z	0.02
TR60	B	2	Z	2	Z	2	Z	0.27
TR61	B	2	Z	2	Z	2	Z	0.27
TR62	C	2	Z	2	Z	2	Z	0.11
TR63	A	2	Z	2	Z	2	Z	0.02
TR64	B	2	Z	2	Z	2	Z	0.41
TR65	A	2	Z	2	Z	2	Z	0.03
TR66	A	2	Z	2	Z	2	Z	0.04
TR67	A	2	Z	2	Z	2	Z	0.09
TR68	A	2	Z	2	Z	2	Z	0.16
TR69	A	2	Z	2	Z	2	Z	0.07
TR70	B	2	Z	2	Z	2	Z	0.42
TR71	A	2	Z	2	Z	2	Z	0.09
TR72	A	2	Z	2	Z	2	Z	0.08
TR73	B	2	Z	2	Z	2	Z	0.28
TR74	B	2	Z	2	Z	2	Z	0.61
TR75	B	2	Z	2	Z	2	Z	0.39
TR76	B	2	Z	2	Z	2	Z	0.44
TR77	A	2	Z	2	Z	2	Z	0.25
TR78	A	2	Z	2	Z	2	Z	0.02

		Maintenance Level and Season of Use						
		Alternative 2		Alternative 4		Alternative 5		
TR79	A	2	Z	2	Z	2	Z	0.05
TR8	A	2	Z	2	Z	2	Z	0.02
TR80	A	2	Z	2	Z	2	Z	0.05
TR81	A	2	Z	2	Z	2	Z	0.02
TR82	A	2	Z	2	Z	2	Z	0.24
TR83	A	2	Z	2	Z	2	Z	0.06
TR84	A	2	Z	2	Z	2	Z	0.07
TR85	A	2	Z	2	Z	2	Z	0.15
TR87	A	2	Z	2	Z	2	Z	0.04
TR88	A	2	Z	2	Z	2	Z	0.09
TR89	B	2	Z	2	Z	2	Z	0.86
TR90	A	2	Z	2	Z	2	Z	0.20
TR93	B	2	Z	2	Z	2	Z	0.50
TR94	A	2	Z	2	Z	2	Z	0.10
TR95	A	2	Z	2	Z	2	Z	0.22
TR96	B	2	Z	2	Z	2	Z	1.13
TR97	B	2	Z	2	Z	2	Z	0.38
TR98	A	2	Z	2	Z	2	Z	0.07
TR99	A	2	Z	2	Z	2	Z	0.04

Appendix B: Field Visit Rationale

Each resource specialist determined the necessity for field visits based on their individual knowledge of areas of interest across the Forest and through the GIS exercise which looked at each individual route against a backdrop of potential areas of concern. The text below describes field visit rationale. 100% of the routes were assessed during the GIS Interdisciplinary Team exercise, which was the first filter. More refined filters were created by each resource specialist and that criteria determined the need for which roads needed field visits.

Botany

Botany evaluated all unauthorized/proposed routes against existing botanical records, using GIS and paper records. Field visits were performed when it appeared that potential habitat for Federally Listed plant species overlapped with routes proposed for addition. Field visits were not performed on other proposed routes because there was neither enough time nor an urgent need to visit every route: most of these unvisited routes were considered to have a low potential for special status plant habitat, and none were considered to have a high potential. Mitigations were not considered necessary, since botany concerns were addressed early on during the project planning process. There were 83 routes that were field visited which is seven percent of the 1,154 proposed unauthorized routes.

Recreation

During the inventory process and subsequent GIS analysis, all routes receiving any type of vehicle use were identified. The Forest identified routes with low resource impact potential as proposed additions to the National Forest Transportation System. As a result, there was not a need to field visit each proposed route by the Recreation Specialist to determine its recreational value; since most of the road segments were proposed to be added and therefore not a concern for recreation.

Heritage

(See appendix F)

Aquatics

Unauthorized and proposed routes were overlaid on aquatic species habitat utilizing GIS and Forest records. All of the routes proposed within RCA's were field checked to determine if there was a hydrologic connectivity to a perennial or seasonally flowing stream. Field visits were not performed on other proposed routes as those outside of RCA's were considered to have no or insignificant potential for impacts to aquatic species.

Monitoring of aquatic resources will occur on unauthorized routes added to the Forest Transportation System utilizing the Best Management Practices Evaluation Program. In areas that have the greatest potential for impacts to aquatic species, monitoring of fine-grained sediments would be implemented using Stream Condition Inventory protocols. Sites monitored may vary from year to year.

Wildlife

As part of the design process for the proposed action, an interdisciplinary team and the Forest's line officers met and evaluated each inventoried unauthorized road segment for inclusion in the NFTS. As part of the evaluation, each segment was reviewed for proximity to sensitive wildlife

habitats. The familiarity of the team and line officers with on-the-ground conditions made subsequent review of these segments duplicative and unnecessary for the wildlife resource area.

Hydrology and Soils

To evaluate direct and indirect effects of the Proposed Action to water quality, the Forest hydrologist used the Forest soils database, housed in GIS layers. He used the following screening criteria (rating factors) to make an initial screen-out:

- Maximum erosion hazard rating (MEHR)
- Water runoff potential
- Watershed sensitivity
- Slope-stability hazard

If all the above ratings factors were low to moderate, then the risk was low. If the risk was low, no field-checking was done.

If the rating factors were exceeded (i.e., if they were greater than low to moderate), the proposed route was field-checked to see if it was consistent with LRMP standards and guidelines for soil and water. In the field, the following method used was to determine if the proposed route met the effectiveness measure from the BMPEP T02 form (Best Management Practice Evaluation Protocol—a standardized form approved by the California State Water Resources control Board). These measures are as follows:

1. Erosion on skid trail**{** XE "trail" **}** surface: little or no evidence of rills
2. Rutting: little or no evidence of rutting
3. Water bars
    a. Diversion of runoff: less than 10 percent of water bars fail to divert flow off skid trail**{** XE "trail" **}**
    b. Sediment below: sediment deposition absent, or does not extend beyond outlet control
    c. Erosion below outlet: no evidence of rills or gullies
4. Sediment to channel: no evidence of transport to the streamside management zone (SMZ)

For the last step in the analysis of direct & indirect effects, the Forest hydrologist analyzed the results of the field check to determine whether the LRMP standards and guidelines had been met.

Appendix C: Monitoring Plan

The following pages show the monitoring plan for the unauthorized routes that are proposed for addition. If a resource is not mentioned below it is because that specialist will not be doing any additional monitoring for these roads under Travel Management other than what would normally be required in the Land and Resource Management Plan (LRMP).

Botany Monitoring Plan

Under each different alternative of the Modoc National Forest Travel Management EIS, there would be different botany concerns requiring differing monitoring needs.

Alternative 1

Alternative 1 provides for cross-country travel, which poses the possibility of effects upon all special status plants on the Forest. Although this would ideally call for monitoring of each plant occurrence as often as possible, this is impractical.

It is recommended, therefore, that the highest priority plants (Endangered and Threatened) would be monitored yearly to determine the effect of cross-country travel upon these plant occurrences. At present, there are 1 Endangered plant occurrence and 16 Threatened plant occurrences known on the Forest, so it should take about three weeks with a two-person crew (one of whom is either the Forest Botanist or Assistant Forest Botanist) to implement botany monitoring protocols upon these sites, including clerical work to appropriately document and file monitoring records. In addition, the plant occurrences in Table B-1 would be monitored, providing a representative sample of Alternative 1's effects upon special status plant populations. In total, this would require six weeks per year with a two-person crew to monitor 34 plant occurrences, including clerical work, and would thus require a budget of about $8,000 per year. Because of the possibility that new roads affecting special status plant occurrences could be created in any year, there should be no time limit on monitoring.

Alternative 2

Table B-1 shows most of the special status plant occurrences located within one hundred feet of roads proposed for addition under Alternatives 2 and 5, save those for *Iliamna bakeri*. *I. bakeri* was removed because it is an upland shrub, growing in conifer or scrub communities, which germinates immediately following fires, and is therefore not especially prone to severe damage, by motorized vehicle traffic. The other species represented here are smaller, and thus more likely to suffer damage by vehicles, and occur in more sensitive habitats, such as meadows, vernal pools, riparian areas, or soft gravelly soils. This leaves 7 rare plant species in 17 occurrences potentially affected by 20 proposed routes.

It is recommended that all 17 occurrences be monitored each year for four years. If no noticeable effects are identified on any of these sites within those four years, then the need to continue monitoring should be re-examined. This would require a two-person crew (one of whom is either the Forest Botanist or Assistant Forest Botanist) three weeks to implement botany monitoring protocols upon these sites, including clerical work to appropriately document and file monitoring records. This would require a budget of about $4,000 per year for four years; however, this regiment may be adjusted at the end of the first year based on findings and professional judgement.

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Alternative 3

No routes would be proposed for addition under this Alternative, and cross-country travel would be prohibited. Therefore, there would be no need for monitoring the effects of implementing this Alternative.

Alternative 4

The botany monitoring plan would be similar to that for Alts. 2 and 5 above, except that four less occurrences (*Calochortus longebarbatus* sites 78A and 82, *Dimeresia howellii* site 2, and *Gratiola heterosepala* site 9) would be monitored, as the routes that would affect them are not proposed for addition in this Alternative.

It is recommended, therefore, that all 13 occurrences be monitored each year for four years. If no noticeable effects are identified on any of these sites within those four years, then the need to continue monitoring should be re-examined. This would require a two-person crew (one of whom is either the Forest Botanist or Assistant Forest Botanist) three weeks to implement botany monitoring protocols upon these sites, including clerical work to appropriately document and file monitoring records. This would require a budget of about $4,000 per year for four years, since it would require about the same amount of driving and organizational time as monitoring for Alternatives 2 or 5; however, this regiment may be adjusted at the end of the first year based on findings and professional judgment.

Alternative 5

Under Alternative 5 no routes would be added that would impact any known Threatened, Endangered, or Sensitive plant species occurrences. Therefore, monitoring would only be needed for the nine known occurrences of Watch List plant species. Monitoring for these Watch List species occurrences (*Carex halliana*, *Dimeresia howellii*, *Gratiola heterosepala*, *Pogogyne floribunda*) would follow protocols similar to those described for Alternative 2.

It is recommended, therefore, that all 9 occurrences be monitored each year for four years. If no noticeable effects are identified on any of these sites within those four years, then the need to continue monitoring should be re-examined. This would require a two-person crew (one of whom is either the Forest Botanist or Assistant Forest Botanist) three weeks to implement botany monitoring protocols upon these sites, including clerical work to appropriately document and file monitoring records. This would require a budget of about $3,000 per year for four years. However, this regiment may be adjusted at the end of the first year based on findings and professional judgment.

Table B-1. Special-Status Plant Occurrences for Botany Monitoring

Species	Status	Occurrence Number	Acres	District Name	Route Number	Miles	Alternative		
							2	**4**	**5**
Buxbaumia viridis	Sensitive	1	.10	Warner Mtn.	BA473 BA474	.15 .11	X	X	
Buxbaumia viridis	Sensitive	4	.10	Warner Mtn.	BA406 BA407	.53 .62	X	X	
Buxbaumia viridis	Sensitive	7	.10	Warner Mtn.	BA472	.12	X	X	
Calochortus longebarbatus var. *longebarbatus*	Sensitive	20	1.3	Big Valley	TR310	.06	X	X	
Calochortus longebarbatus var. *longebarbatus*	Sensitive	77	186	Devil's Gdn.	JW2135	.13	X	X	
Calochortus longebarbatus var. *longebarbatus*	Sensitive	78A	31	Devil's Gdn.	BA143	.50	X		
Calochortus longebarbatus var. *longebarbatus*	Sensitive	82	3.3	Devil's Gdn.	ML432	.21	X		
Carex halliana	Watch List	7	29.2	Doublehead	BA2204	.09	X	X	X
Dimeresia howellii	Watch List	2	.6	Warner Mtn.	BA497	.22	X		X
Eriogonum umbellatum var. *glaberrimum*	Sensitive	6	1	Warner Mtn.	SS551	.10	X	X	
Gratiola heterosepala	Watch List	9	357	Devil's Gdn.	BA173	.08	X		X
Gratiola heterosepala	Watch List	13	51.4	Devil's Gdn.	ML584	.10	X	X	X
Gratiola heterosepala	Watch List	16	.5	Doublehead	BA55	.17	X	X	X
Gratiola heterosepala	Watch List	18	1.6	Doublehead	BA2217	.22	X	X	X
Pogogyne floribunda	Watch List	4	1.6	Doublehead	BA71	.97	X	X	X
Pogogyne floribunda	Watch List	10	8.2	Doublehead	ML299	2.27	X	X	X

Species	Status	Occurrence Number	Acres	District Name	Route Number	Miles	Alternative		
							2	**4**	**5**
Pogogyne floribunda	Watch List	29	24	Devil's Gdn.	SS312	.86	X	X	X

The Modoc National Forest recently issued the Noxious Weed Treatment Project Final Environmental Impact Statement (NWTPFEIS; R5-MB-167; Aug. 2008). As part of the NWTPFEIS, we will monitor noxious weeds on the Forest as part of the Early Detection – Rapid Response and treatment effectiveness monitoring. The NWTPFEIS, as a forest-wide weed monitoring and treatment project, covers all areas under consideration in the Motorized Vehicle Travel Management project.

Heritage Resources Monitoring Plan

As identified in the Modoc National Forest Travel Management EIS under Heritage Resources under Alternatives 2, 4, and 5, it has been recommended to relocate two previously recorded archaeological sites to see if they are actually within the affected area of the route designation and monitor their condition, and to monitor another 242 archaeological sites that have been identified as being within route designation corridors. These efforts are designed to enable a better determination of the affects, if any, upon these cultural resources by route designation. The effects may be the result of the continuing use of these routes after designation. Thus, there is a total of 244 archaeological sites that require some level of relocation and monitoring.

It is recommended that this process be spread over a three-year period.

First, both of the archaeological sites marked for relocation should be relocated within this time period. If either of these sites is found to be within the designated route corridor it would have a new archaeological site record completed and a baseline condition assessment made a part of that record. If a site is determined to be outside of the route corridor, its updated site record may be deferred to a later date.

Second, a sample of the 242 archaeological sites designated for monitoring should be examined each year. It is recommended that a 10 percent sample be selected—or 24 sites per year for three years. If no noticeable effects are identified on any of these sampled sites, then the need to continue monitoring should be reexamined.

It is anticipated that given the relatively light use that most of the designated routes exhibit at present, if use does not increase significantly as a result of designation, that continued light use should have little noticeable effect on these sites.

Hydrology and Soils Monitoring Plan

Monitoring of soils and hydrology resources will occur on unauthorized routes added to the Forest transportation system, using the Best Management Practices Evaluation Program. See Appendix G , Water Quality Monitoring Plan.

Aquatics Monitoring Plan

Monitoring of aquatic resources will occur on unauthorized routes added to the Forest Transportation System utilizing the Best Management Practices Evaluation Program. In areas that have the greatest potential for impacts to aquatic species, monitoring of fine-grained sediments would be implemented using Stream Condition Inventory protocols. Sites monitored may vary from year to year.

Facilities Monitoring Plan

Condition Surveys are performed on all maintenance level 3,4, and 5 roads every 5 years, with approximately 20 percent completed each year.

Condition Surveys are performed on maintenance level 1 & 2 roads based on a random sample generated by the Washington Office. It is a relatively small sample. All of the roads that are proposed for addition will be classified as level 2.

In addition to the formal condition surveys, we monitor road conditions continually as they are driven for other purposes. As problems are identified, they are addressed as resources allow.

There will be no additional monitoring resulting from Travel Management; however whatever roads are added to the system will be monitored based on the guidelines listed above.

Wildlife Monitoring Plan

Wildlife monitoring on the routes added to the system will be done annually and will begin at the rate of 15 routes per year. However, this regiment may be adjusted at the end of the first year based on findings and professional judgment.

Recreation Monitoring Plan

There is no monitoring proposed for recreation.

Visual Resources Monitoring Plan

There is no monitoring proposed for visual resources.

Appendix D: Water-Quality Management Plan

Introduction

The purpose of the Water Quality Management Plan is to meet state water quality objectives as identified by the State of California Water Quality Control Board, and to protect and maintain the identified beneficial uses of water flowing off National Forest System (NFS) lands from the occurrence of an adverse or negative direct and indirect effect to water quality. The downstream beneficial use of the water is identified by the appropriate regional control water boards (Central Valley, Lahontan, and North Coast)

Water Quality Management Plan

The primary method of meeting the above-stated purposes of the water management plan is by maintaining the National Forest Transportation System (NFTS) in a manner where the roadways are not hydrologically connected to the stream network, or to insure the roadways are not subject to excessive levels of road runoff or road erosion. The following water-quality guidelines are based on applications of BMPs, and are incorporated into the designation of proposed routes as additions to the NFTS Plan. This can be accomplished in the following manner:

- Disconnect the hydrologic connectivity of roads to the stream and lake network across the Forest.
- Maintain the proposed routes with adequate water diversion structures (e.g., cross drains, water bars, or rolling dips) to prevent the gulling of the routes. Use of natural gradient slope breaks and route relocation, promoting travel along the contours, and minimizing hill climbs are also acceptable measures to achieve the desired goal.
- Over the next 10 years, complete monitoring of the routes dedicated to OHV use and longer than 0.5 miles (this does not include mixed-use routes) according to a developed protocol. The recommended protocol is the Region 5 OHV Trail-Monitoring Protocol (the red-yellow-green protocol developed by Brent Roath, Region 5 Soil Scientist). It is assumed that approximately 20% of the dedicated use OHV routes added to NFTS would be monitored per year.
- Annually, routes added to the NFTS would be monitored under the R5 BMPEP as part of the Forest-wide monitoring program. These routes would be picked at random and can be monitored using the following BMPEP forms:

    BMPEP form E08: Road Surface, Drainage, and Slope Protection; and BMPEP form #09: Stream Crossings

    BMPEP Form E20: Management of Roads During Wet Periods

Within Region 5, past monitoring completed as part of the Best Management Practices Evaluation Program (BMPEP), has validated the effectiveness of BMPs in mitigating the effects of Forest management activities on water quality. No evidence has been observed during monitoring completed in 2000-2008 of multiple Forest management activities (i.e., timber sales, road maintenance, road reconstruction and fuels reduction projects) that these projects were adding additional levels of sediment into the stream network, above the natural erosion rate when the BMP is implemented according to plan description or guidance.

Description of Best Management Practices

The Forest Service water quality maintenance and improvement measures called Best Management Practices (BMPs) were developed in compliance with Section 208 of the Federal Clean Water Act, PL92-500, as amended. Following a lengthy development and public review process from 1977 to 1979, the BMPs developed by the Forest Service were certified by the State of California Water Quality Control Board and the US Environmental Protection Agency. These practices are the measures both the state and federal water quality regulatory agencies expect the Forest Service to implement to meet federal and state water quality objectives, and to maintain and improve water quality.

In 1997, the BMPs were reviewed and evaluated by a cadre of water resources specialists in the Forest Service. The result of this effort was to update and improve the BMP program in Region 5. In 1999 and 2000, the updated version of the BMPs, as revised by agency water quality and aquatics specialists, were reviewed and approved by the State Water Quality Control Board for implementation.

Based on monitoring of similar type of activities on the Modoc National Forest, BMPs have been proven to be effective measures in protecting water quality, based on the identified beneficial uses. BMPs have been shown to be effective measures in meeting state and federal water quality objectives as identified by the Central Valley Basin Water Quality Control Plan, and will aid in providing protection of hydrologic function of the watersheds and stability of stream courses.

Table 1. Description of Best Management Practices

BMP #	Name	Objective
1.20	Erosion Control Structure Maintenance	To ensure that constructed erosion control structures are stabilized and working
2.7	Control of Road Drainage	To minimize road runoff and related sediment production from road surfaces
2.22	Maintenance of Roads	To maintain roads in a manner which provides for water quality protecting by minimizing rutting, failures, side casting, and blockage of drainage facilities, all of which can cause erosion, sedimentation, and deteriorating watershed conditions
2.23	Road Surface Treatment to Prevent Loss of Materials	To minimize the erosion of road surface materials and consequently reduce the likelihood of sediment production from those areas
2.24	Traffic Control During Wet Periods	To reduce road surface disturbance, rutting of roads, and minimize the sediment washing from the disturbed roads
2.26	Obliteration or Decommissioning of Roads	To reduce sediment generated from temporary or unclassified and system roads by obliterating or decommissioning them at the completion of their intended use
4.7	Water Quality Monitoring of Off-Highway Vehicle (OHV) Use according to a Developed Plan.	To provide a systematic process to determine when and to what extent OHV use would cause, or is causing, adverse effects on water quality

BMP #	Name	Objective
7.7	Management by Closure to Use	To exclude activities that could result in damages to either resources or improvements, resulting in degraded water quality

Conclusion

By implementing the above-described water quality standards, it is unlikely that the proposed activities would result in an adverse or negative direct or indirect effect to water quality or its identified downstream beneficial uses.

Appendix E: Past, Present, and Reasonably Foreseeable Actions

The following actions were considered in cumulative effects analysis for each resource: fuel treatments and{ XE "**Fuels" }** fire{ XE "**Fire" }**, range management, dam construction and maintenance, recreation{ XE "**Recreation" }**, timber management and vegetation treatment, reforestation, road management, special uses{ XE "**Special uses" }**, and noxious weed{ XE "**Noxious weed" }** treatment. Below is a description of these actions. Reasonably foreseeable and present actions on National Forest System lands considered in cumulative effects analysis are shown in Table H-2, which was developed by reviewing the July to September 2008 Schedule of Proposed Action{ XE "**Proposed action" }**s.

Fuel Treatments and Fire{ XE "Fire" }

Approximately 10,000 acres are proposed for fuel treatments per year across the forest: 4,000 acres of prescribed burns and 6,000 acres of mechanical and physical fuel treatment. Present and reasonably foreseeable fuel projects are listed in Table H-2. The fuels{ XE "**Fuels" }** program does not build roads to carry out treatment. Cross-country travel may be required either by truck or OHV.

Wildfire and associated suppression and rehabilitation measures sometimes require the creation of temporary roads and fuel breaks that in the past have been used by the public and turned into unauthorized routes on the forest.

Range Management

Grazing allotments occur on most of the Modoc National Forest. Presently there are 76 active allotments, 12 vacant allotments, and 3 allotments that have been closed to grazing. There are approximately 122,500 animal unit months (AUMs) of grazing permitted on the forest. Actual use differs annually from permitted use depending on economics, weather conditions, market conditions, etc. During 2007, actual use was about 95,700 AUMs. There is also one wild-horse territory with an estimated population of 450 head.

Individual range-management projects include installing cattle guards, fencing, developing water sources, and thinning juniper. Projects such as fencing and juniper thinning, and administering permits (e.g., scheduling on- and off-dates) have restored riparian areas{ XE "**Riparian areas" }**. Range management generally does not include the creation of new roads. Present and reasonably foreseeable range projects are included in Table H-2.

Dam Construction and Maintenance

There are 152 dams and water impoundments on the forest, which are used for livestock ponds, irrigation, recreation{ XE "**Recreation" }**, and wildlife{ XE "**Wildlife" }** habitat. Thirty-four of these are considered as dams by the State of California. Associated with irrigation dams are canals used to transport water. Many of these structures are maintained by range permittees.

Recreation{ XE "Recreation" }

On the Modoc National Forest, there are 34 developed campgrounds and several other developed recreation sites, including boat launch facilities, trail heads, etc., and numerous dispersed

recreation sites (primarily dispersed campgrounds). Present recreation projects are shown in Table H-2. There is not any road construction shown in the SOPA for the proposed projects.

Travel management and the restriction of cross-country travel will impact recreation users by eliminating a certain type of recreation opportunity. However, many of the recreation opportunities will still be available.

There is a variety of recreation-{ XE "**Recreation" }**associated activities,**{** XE "**Noxious weeds" }** including firewood gathering, mineral gathering, hiking, camping, and horse use.

Timber Harvest and Vegetation Treatments

The forest estimates a timber harvest of approximately 15-20 MMBF (million board-feet) annually for the next 5 years. About half of that will be the board-foot equivalent in tons of chips for biomass power generation, and half in sawtimber. Past vegetation management actions are tracked in the FACTS (Forest Activity and Tracking System) database. This database contains information about vegetation management activities back to 1954. Since 1954, there have been over 169,939 acres of vegetation treatments on the forest. On average, 2,500 acres are harvested annually for saw logs, with an additional 3,000 acres for wood fiber. Harvest prescriptions vary from clear cutting to understory thinning; however, clear cutting has been greatly reduced over the past ten years.

In the past, road construction was supported by timber harvest. The existing forest transportation system was developed, in part, through the need to provide timber to the public after World War II. This trend continued until the late ‘70s or early ‘80s. In the future, the forest plans to evaluate each project on a site-specific basis for existing roads that can be used, and for the possible decommissioning of roads that are no longer necessary. There may still be a need for temporary road construction and for the reconstruction of existing roads to allow for use of new equipment and for adjusting to specific logging systems required for steeper ground.

The Sage Steppe Ecosystem Restoration Strategy, a reasonably foreseeable action, is a programmatic analysis for treating 1,254,200 acres of juniper on the Modoc National Forest, BLM Alturas Field Office lands, and surrounding federal lands that lie within the sage steppe ecosystem. Treatment would be through mechanical treatment**{** XE "**Mechanical treatment" }**s, hand treatments, or prescribed fire**{** XE "**Prescribed fire" }{** XE "**Fire" }**. This project consists of restoring sagebrush communities that have been invaded by juniper over the last 100 to 150 years. There will be no new permanent roads built to support this project.

Reforestation

Reforestation will occur as needed after wildfires or timber management. Past activities associated with replanting trees included the use of herbicides and mechanical and physical site preparation to reduce the competition for soil**{** XE "**Soil" }** nutrients and sunlight from grasses and shrubs (release). Existing roads are used for reforestation projects.

Road and Right-of-Way Management

A system of federal, state, and county highways provides access to the Modoc National Forest. Forest system roads are extensions of these highways, and provide access to and mobility within the forest. Roads allow protection, management, use, and development of forest resources on which local communities depend. The forest road system consists of approximately 4,996 miles. Integrated with the system are approximately 416 miles of private roads**{** XE "**Roads" }**. There are also approximately 491 miles of non-system roads on the forest.

State and County{ XE "County" } Easements

Sixty miles of state highway cross portions of the Modoc National Forest. The highway right-of-way is managed according to the terms of the specific easement. Vegetation management within the right-of-way is done according to the laws and regulations of the State of California.

Modoc County maintains about 1,040 miles of roadway through the Modoc National Forest. These roads**{** XE "**Roads" }** are maintained by agreement with the forest, or as easements. The rights-of-way are maintained according to county standard.

Railroads

Two railroads cross portions of the Modoc National Forest. Railroad rights-of way are embedded in the forest and are owned by the railroad.

Special Uses{ XE "Special uses" }

Approximately 325,000 acres of privately owned lands lie within the forest boundary (2,000 state acres, 1,000 tribal acres, and 323,000 acres of land owned by companies and individuals).

The Modoc National Forest has a caseload of about 160 special-use authorizations annually for apiaries, ditches, dams, water sources, roads**{** XE "**Roads" }**, recreational residences, utility transmission and communication sites, outfitters and guides, a ski hill, and miscellaneous permits. Special uses on the forest encompass over 125,000 acres and result in a return of over $70,000 in fees to the U.S. Treasury. Special-use permits authorize facilities and services necessary for public health, welfare, safety**{** XE "**Safety" }** and security, such as communications sites for local 911 radio repeaters to support local law enforcement and emergency response entities. Others provide basic needs such as power and telephone lines to private homeowners.

All new authorizations are issued with specific terms and conditions; road construction is generally not part of a new authorization.

The Modoc National Forest administers slightly over 3,000 acres authorized for the purpose of transmitting or distributing power in the form of electricity and natural gas. In many cases these acres overlap because power and pipeline facilities are located within designated corridors.

Currently there is analysis for a proposal for vegetation maintenance for the U.S. Department of Energy's Western Area Power Authority, Sierra Nevada Region (right-of-way vegetation maintenance for high-voltage power lines), including two 500-kV transmission lines through the Doublehead Ranger District. The proposal includes the maintenance of vegetation within the right-of-way with manual methods (cutting, girdling, topping and trimming), mechanical methods (mowing), and use of herbicides. The proposal specifies maintaining 30 feet of clearance around each transmission tower or structure.

The Modoc National Forest administers 1,460 acres rented to public and private agencies for communications purposes. Over 900 acres of that is authorized to the Department of Defense for a radar installation. The remaining acres are within nine designated communications sites or are parallel to transportation, power line, or pipeline facilities. These authorizations require prior approval for removal of vegetation.

Past Road Construction and Decommissioning

Over the past ten years there have been 9.5 miles of new road constructed and 76.8 miles decommissioned. See Table H-1 below.

Table H4-1. Road Construction and Decommissioning from 1998 to 2007

Fiscal Year	Decommissioning (miles)	Construction & Reconstruction (miles)
1998	13.5	0.0
1999	20.0	0.0
2000	9.4	0.0
2001	15.0	0.0
2002	14.9	0.0
2003	4.0	0.3
2004	0.0	9.1
2005	0.0	0.1
2006	0.0	0.0
2007	0.0	0.0

Other Federal Lands in California

National Forest Lands

The Modoc National Forest abuts the Klamath and Shasta-Trinity national forests on the western flank. The Lassen National Forest administers some of these lands, and also has land that lies roughly 2 to 4 miles south of the Big Valley District.

Klamath National Forest-Goosenest District: There are approximately 1,005 miles of NFTS (National Forest Transportation System) roads on the district and 309 miles of unauthorized routes.

Lassen National Forest: The Lassen National Forest is doing its travel management process. It has completed a notice of intent; the proposed action includes adding 37 miles of unauthorized routes, 12 miles of additional mixed use routes, and 26 acres for open use.

Shasta-Trinity National Forest: The Shasta Trinity is currently in the travel management process and intends to publish its notice of intent in July, 2008. The forest has 6,754 miles of NFTS roads and 175 miles of NFTS trails. Their proposed action will designate 33 miles of roads and 11 miles of trails. There will be no open-use areas, but there will be a change in the designation of "below high-water areas."

Federal Lands under Other Administration

Lava Beds National Monument: The monument has an existing road system. We are unaware of any plans to add to it.

Tule Lake National Wildlife Refuge: The refuge has an existing road system. We are unaware of any plans to add to it.

Klamath Basin National Wildlife Refuge: The refuge has an existing road system and does not propose to create any new roads for public use in the near future.

Modoc National Wildlife Refuge: The refuge has an existing road system and does not propose to create any new roads for public use in the near future.

BLM-Alturas and Surprise Valley Offices: Both the Alturas and Surprise Valley offices recently completed resource management plans (RMPs) and signed records of decision in April 2008. Both offices included a section on travel management. In both areas, OHV travel will be "limited to existing roads and trails" year-round, except where further restrictions are specifically assigned (i.e., "open", "closed," "seasonally closed", or "limited to designated routes").

The Alturas Field Office manages approximately 503,045 acres in northeastern California. The geographic area consists of BLM-administered lands within the counties of Modoc, Lassen, Shasta, and Siskiyou, California. There are 902 miles of system roads in the Alturas District and

OHV travel would be 'Limited to Existing Roads and Trails' year-round, except where further restrictions are specifically assigned off-highway vehicle. Eighty acres are designated open, 498,140 acres are designated as 'limited to designated routes' and 4,825 acres are designated closed. The RMP also proposes to construct approximately 66 miles of new motorized and non-motorized trails, including a 40-mile stretch of the abandoned Modoc Line rail bed.

The Surprise Valley Field Office manages approximately 1,220,644 acres in northeastern California and northwestern Nevada. The geographic area consists of BLM-administered lands within the counties of Modoc and Lassen (California) and Humboldt and Washoe (Nevada). The Surprise Valley office will manage 1,809 miles of routes as the designated route network for access to BLM-administered lands, and close 92 miles of routes within WSAs (wilderness study areas). OHV use would be designated as 0 acres open, 1,208,670 acres "limited to designated routes", and 11,994 acres closed. An OHV special recreation management area would be developed if the need arises. Commercial, competitive, and other organized OHV activities would be managed with special recreation permits. Road maintenance would continue at a rate of 30 to 75 miles per year.

Private Land

There are currently 416 miles of non Forest Service roads within the Forest Service boundary. This includes roads managed by the county across FS lands and private roads on private land that are within the Forest Service boundary. Because private landowners do not typically publish their long-term management plans, actions on private land are difficult to analyze. Some new roads could be built on private lands to support restoration projects and provide access; however, new roads on private lands would likely not be open to the public. (Sage Steppe EIS) Cross-country travel will most likely continue across private land by ranchers and others in their day-to-day business and for recreation. Timber production will continue on private land and road construction associated with that will likely occur. These roads will probably be temporary and will support timber operations. Firewood gathering will continue to occur on private land but most likely will use existing roads and travel cross country will be for short distances only. There are two existing utility corridors that cross private land and there are no future plans for additional corridors in the future.

Table H-2. Present and Reasonably Foreseeable Actions[1]

Activity	NEPA Project Name	District
Fuels Management	Rush2 Vegetation Treatment	BV
Fuels & Vegetation Management	Devil's Garden Plantation Management	DG
Fuels & Vegetation Management	Cedar Pass Forest Health	WM
Fuels & Vegetation Management	Lassen Creek Watershed Forest Health and Restoration Project	WM
Fuels & Vegetation Management	North Warner Roadside Fuel Break Management	WM
Fuels & Vegetation Management	Fletcher Fire Salvage	DG
Grazing Management	Crank Springs, Gerig, Kramer, Shawville and Happy Camp Allotments	BV
Grazing Management	Pit River Fence	BV
Grazing Management	Riparian and Upland Enhancement at Pit river Allotments Adjacent to Shaw Ranch	BV
Grazing Management	Spring Hill Allotment Stockpond	BV
Grazing Management	Triangle Allotment Grazing Management Project	DG
Grazing Management	Crummes Allotment EA	DH
Grazing Management	Tucker Grazing Allotment EA	DH
Minerals and Geology	Geothermal Leasing - Lake City KGRA	WM
Road Management	BIA Road Improvement Lauer Reservoir Access	DG
Road Management	Medicine Lake Highlands Road Closure	DH
Special Use and Recreation	Warner Mountain Relay Event	WM
Special Uses	Ewind Testing Project for Existing Sites	BV, DH
Special Uses	Ewind Testing Project for Potential Sites	BV
Special Uses	Fandango Pass Wind Energy Project	WM
Vegetation Treatment	Noxious Weed Treatment	Forest-wide
Vegetation Treatment	Sage Steppe Ecosystem Restoration Strategy	Forest-wide

Vegetation Treatment	Ash Vegetation Treatment	BV
Vegetation Treatment	Black Mountain Plantation Thinning and Fuels Treatment	DH
Vegetation Treatment	Clear Lake Quaking Aspen Restoration Project	DH
Vegetation Treatment	Highlands Roadside Safety Improvement Project	DH
Wildlife Improvement	Devils Garden Guzzlers	DG

[1] Projects listed on the 07/01/2008 to 09/30/2008 Schedule of Proposed Action**{** XE "**Proposed action" }**s for the Modoc National Forest

Appendix F: Environmental Consequences of Unauthorized Routes to Archaeological Sites

This appendix analyzes the environmental consequences of the identified unauthorized, user-created routes have, or are believed to have, on the associated archaeological sites.

The nature of the effect varies greatly, depending upon how each site is associated with a route. For example, a site may be bisected by a route, it may be adjacent to a route (within 30 meters of either side of the route), it may be adjacent or bisected and have a dispersed recreation camp site (hunter's camp) associated with it, it may have past wood-cutting activity present, etc. Table I-1 below shows the affected sites within the Proposed Action, and the perceived effects. A "direct effect" means that the route actually crosses the site or some associated activity, e.g., a hunter's camp is directly on the site. An "indirect effect" means that the site is adjacent to the route and that there may be signs that users of the road are somehow affecting the site ("pot hunting" or looting). "None" means that the site is adjacent to the route, but there is no evidence that it has been affected. Cumulative effects are the anticipated effects that would occur through time to sites that continue to be accessible by these routes.

For the "Types of Effect" column in the table below we have used the following codes:

N = None D = Direct I = Indirect C = Cumulative

For the "Nature of Effect" column we have used the following codes:

R = rutting (visible traces through the site; some soil displacement or minor erosion)

C = camping (a dispersed recreation and hunting camp physically on the site; fire ring, modern debris, etc.)

L = looting (visible "pothunters' piles" of flakes or other signs of artifact collection or removal)

WC = woodcutting (evidence of firewood cutting—slash piles, stumps, etc.)

B = bladed and engineered road (constructed as an access and maintenance road for a power transmission line, gas transmission line, OTH-B Radar Installation, or other permitted facility)

N= no direct effects observed

For the most part, no significant "erosion" was noted on any of the sites visited; this may be due to the relatively flat nature of most of the forest. The "rutting" may range from very minor visible "two-track traces", to very deep ruts caused by utilizing the road in mudding conditions creating ruts up to 10 to 20 centimeters in depth. Generally, the overall use of these routes by off-highway vehicles (OHVs) is very light, with few roads appearing to get any major use. Also of note are the routes to be added that are actually access or maintenance roads for power lines (e.g., California-Oregon Transmission Powerline, Bonneville Power Administration Malin-Warner, Western Area Power Authority), natural gas transmission lines (e.g., Pacific Gas Transmission Company, Pacific Gas & Electric Company, and Tuscarora Gas Transmission Company), and the Over-The-Horizon Backscatter Radar Installation military facility. These roads were constructed under special-use permits. Major effects many include severe rutting and erosion, exposing

archaeological deposits; direct camping on sites, resulting in surface disturbance digging of privy pits or campfire pits; direct collection of surface artifacts; and excavation or other directs signs of vandalism. All of the associated sites, if directly affected by these routes, have been subjected to evaluation for the National Register of Historic Places. They were either determined to be ineligible and therefore not affected, or they were determined eligible and had data recovery undertaken as mitigation for the effect. Continued use of these routes by the public, however, could continue to affect those sites determined to be eligible and still substantially intact and adjacent to the routes.

For the "Severity of Effect" column we have used negligible, minor, moderate, or major. Only the "major" category has the potential to significantly affect potential National Register of Historic Places (NRHP) eligibility criteria to the point that the eligibility status may be jeopardized. Both the "major" and "moderate" categories may warrant the use of protection measures to lessen or mitigate the effects. For the most part, monitoring is recommended for these sites to determine the exact nature of the effects and to enable the decision as to what would be the best or most practicable mitigation measure to implement on a site-by-site basis. All recorded archaeological sites associated with proposed routes are listed in the following table, even if determined ineligible for the NRHP for a previous undertaking. Sites ineligible for the NRHP and sites determined to be unaffected by the route designations will not be proposed for monitoring of effects of the route designations. Routes that have deferred inventory under the Motorized Recreation Programmatic Agreement and have known or suspected recorded sites associated with them, but did not have the sites field verified, have the site identified for relocation to confirm their association and assess the nature of potential route effects.

Tribal consultation has not identified any significant effect on access to or use of traditional plant-gathering areas, or areas of other traditional cultural practices or religious uses.

Table I-1. Alternatives 2,4, and 5—Effects to Known Cultural Resources

Note: All of the routes listed here are within Alternatives 2 and 5; bolded entries are the routes deleted from Alternatives 2 and 5 to create Alternative 4 (the unbolded entries).

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
BA104	56-2859/H	D/I	R	MINOR	MONITOR
BA130	55-1453	D/I	R	MINOR/NEG.	MONITOR
BA16	55-2081	D/I	R	MINOR	MONITOR
BA16	55-2407H	D/I	R	MINOR	MONITOR
BA16	55-2409H	NONE	N	N	MONITOR
BA206	55-0139/H	D/I	R	MINOR	MONITOR
BA215	55-0473	NONE	N	N	N
BA223	55-0488	D/I	R	MINOR	RELOCATE
BA2234	56-1600	D/I	R	MINOR	MONITOR
BA226	55-0616	D/I	R	MINOR	MONITOR
BA227	55-0615	D/I	R	MINOR	MONITOR
BA228	55-0621	D/I	R/L	MINOR	MONITOR
BA2289	55-0843	D/I	R	MINOR	MONITOR
BA2290	55-0758	D/I	R	MINOR	MONITOR
BA2300	55-1703	D/I	R	MINOR	MONITOR

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
BA2301	56-0871	D/I	R	MINOR	MONITOR
BA241	**55-1047**	**D/I**	**R**	**MINOR**	**MONITOR**
BA241	**55-1049**	**D/I**	**R/WC**	**MINOR**	**MONITOR**
BA241	**55-1058**	**NONE**	N	N	N
BA248	55-0710	D/I	R	MINOR	MONITOR
BA26	56-0059	I	N	N	MONITOR
BA267	55-1333	D/I	R/C/L	MINOR	MONITOR
BA27	55-2242	D/I	R	MINOR	MONITOR
BA27	55-2243	D/I	R	MINOR	MONITOR
BA28	55-2242	D/I	R	MINOR	MONITOR
BA28	55-2243	D/I	R	MINOR	MONITOR
BA283	55-0863	D/I	R/L	MINOR	MONITOR
BA296	55-0809	D/I	R	MINOR	MONITOR
BA347	53-1013	D/I	R/C/L	MODERATE	DO NOT AUTH
BA358	53-0838	N	N	N	INELIGIBLE
BA359	53-0838	N	N	N	INELIGIBLE
BA368	53-0166	D/I	R	MINOR	MONITOR
BA373	**53-0264**	**D/I**	**R**	**MINOR**	**MONITOR**
BA373	**53-0266**	**D/I**	**R/C/L**	**MINOR**	**MONITOR**
BA38	55-1389	NONE	N	N	N
BA397	**53-0172**	**D/I**	**R**	**MINOR**	**MONITOR**
BA407	53-1321	D/I	N	NEGLIGIBLE	MONITOR
BA408	53-1385	I	N	NEGLIGIBLE	MONITOR
BA412	53-1320	D/I	N	NEGLIGIBLE	MONITOR
BA412	53-1455	D/I	R	NEGILIGIBLE	MONITOR
BA431	53-0735	D/I	R/C/L	MINOR	MONITOR
BA438	**53-0984**	**I**	**L**	**MINOR**	**MONITOR**
BA442	53-0426	D/I	R/C/L	MODERATE	DO NOT AUTH
BA443	53-0426	D/I	R/C/L	MODERATE	DO NOT AUTH
BA444	53-0426	D/I	R/C/L	MODERATE	DO NOT AUTH
BA445	53-0426	D/I	R/C/L	MODERATE	DO NOT AUTH
BA446	53-0828	I	WC	MINOR	MONITOR
BA449	53-0409	D/I	C/L	MINOR	MONITOR
BA452	53-0409	D/I	C/L	MINOR	MONITOR
BA485	**53-0549**	**D/I**	**R/WC**	**MINOR**	**MONITOR**
BA490	53-1051	D/I	R/C/L	MINOR	MONITOR
BA491	**53-1071**	**I**	**N**	**NEGLIGIBLE**	**N**
BA491	**53-1082**	**D/I**	**R/L**	**MINOR**	**MONITOR**

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
BA491	**53-1083**	**D/I**	**R**	**MINOR**	**MONITOR**
BA492	53-0054	D/I	R	MINOR	MONITOR
BA493	53-0054	D/I	R	MINOR	MONITOR
BA495	53-1119/H	D/I	R	MINOR	MONITOR
BA501	53-0996/H	D/I	R	MINOR	MONITOR
BA503	53-1130/H	D/I	C	MINOR	MONITOR
BA54	56-0823/H	D/I	R	MINOR	MONITOR
BA55	56-2114/H	D/I	R/C/L	MINOR	MONITOR
BA67	56-3014	I	N	NEGLIGIBLE	MONITOR
BG19	55-1602	D/I	R	MINOR	MONITOR
BG2	55-1584	D/I	R	MINOR	MONITOR
BG39	55-0103/H	D/I	R	MINOR	MONITOR
BG49	55-1606	D/I	R	MINOR	MONITOR
BG49	55-1614	I	N	NEGLIGIBLE	MONITOR
BG7	55-0551/H	D/I	R	MINOR	MONITOR
BG7	55-2413	D/I	R	MINOR	MONITOR
DJ13	55-2407H	D/I	R	MINOR	MONITOR
DJ13	55-2408	D/I	R	MINOR	MONITOR
DJ27	56-1509	D/I	R	MINOR	MONITOR
JW60	56-3171H	D/I	R	MINOR	MONITOR
JW81	55-1083	D/I	R	MINOR	MONITOR
JW82	56-1792/H	D/I	R	N	INELIGIBLE
ML105	55-2334	D/I	R	NEGLIGIBLE	MONITOR
ML105	55-2335H	D/I	R	NEGLIGIBLE	MONITOR
ML105	55-2338	D/I	R	NEGLIGIBLE	MONITOR
ML105	55-2340/H	D/I	R/WC	MINOR	MONITOR
ML105	55-2343H	D/I	R	MINOR	MONITOR
ML106	55-2342/H	D/I	R	MINOR	MONITOR
ML123	55-2410H	NONE	N	N	N
ML123	55-2411H	D/I	R	MINOR	MONITOR
ML1310	56-2418	D/I	R	MINOR	MONITOR
ML146	56-1294	I	N	N	INELIGIBLE
ML146	56-1295	I	N	N	INELIGIBLE
ML146	56-1296	I	N	N	MONITOR
ML146	55-2323	I	N	N	MONITOR
ML146	55-2324/H	D/I	R	MINOR	MONITOR
ML146	55-2290	I	WC	MINOR	MONITOR
ML164	55-2326H	NONE	N	N	N

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
ML164	55-2327H	D/I	R	MONOR	MONITOR
ML164	55-2336H	D/I	R/WC	MINOR	MONITOR
ML172	55-2329H	D/I	R/L	MINOR	MONITOR
ML172	55-2331	D/I	R/L	MINOR	MONITOR
ML181A	55-0084	D/I	R/L	MINOR	MONITOR - E
ML181A	55-1521/H	D/I	R	MINOR	MONITOR
ML181A	55-1522	D/I	N	N	INELIGIBLE
ML181A	55-1742	D/I	N	N	INELIGIBLE
ML198	55-2156	D/I	R/C/L	MODERATE	DO NOT AUTH
ML201	55-2156	D/I	R/C/L	MODERATE	DO NOT AUTH
ML2010	56-1792/H	D/I	N	N	INELIGIBLE
ML202	55-2156	D/I	RCL	MODERATE	DO NOT AUTH
ML203	55-2156	D/I	R/C/L	MODERATE	DO NOT AUTH
ML2035	56-0917	D/I	R	MINOR	MONITOR
ML2095	**55-1927**	**NONE**	**N**	**N**	**N**
ML244	56-2045	D/I	R/L	MINOR/MOD	DO NOT AUTH
ML250	**56-2100/H**	**D/I**	**R**	**MINOR**	**MONITOR**
ML250	**56-2323H**	**D/I**	**R**	**MINOR**	**MONITOR**
ML251	**56-2120**	**D/I**	**R**	**MINOR**	**MONITOR**
ML251	**56-2323H**	**D/I**	**R**	**MINOR**	**MONITOR**
ML260	**56-2323H**	**D/I**	**R**	**MINOR**	**MONITOR**
ML283	56-1185	D/I	R	MINOR	MONITOR
ML283	56-1190	D/I	R	MINOR	MONITOR
ML288	56-2183/H	D/I	R/WC	MINOR	MONITOR
ML293	56-1220	I	N	MINOR	MONITOR
ML293	56-1226	I	N	MINOR	MONITOR
ML293	56-1266	I	B	N	INELIGIBLE
ML293	56-1267	I	N	MINOR	MONITOR
ML293	56-1268	I	N	MNIOR/NEG	MONITOR
ML293	56-1274	I	B	N	INELIGIBLE
ML293	56-1276	D/I	B	N	INELIGIBLE
ML293	56-1277	I	B	MINOR	MONITOR
ML299	56-1235	D/I	R	N	MONITOR
ML299	56-1295	D/I	B	N	INELIGIBLE
ML3	55-2418	D/I	R/WC	MINOR	MONITOR
ML300	56-1096	I	N	MINOR	MONITOR
ML300	56-1099	I	N	MINOR	MONITOR
ML300	56-1143	I	B	N	INELIGIBLE

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
ML300	56-1144	I	B	N	INELIGIBLE
ML300	56-1293	I	B	N	INELIGIBLE
ML300	56-1396	I	N	MINOR	MONITOR
ML300	56-1399	I	N	MINOR	MONITOR
ML300	56-1400	I	B	N	INELIGIBLE
ML310	56-3080	I	N	N	MONITOR
ML312	56-1206	D/I	R	N	INELIGIBLE
ML315	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML317	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML318	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML319	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML322	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML323	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML324	56-1060/-1061/-1062	D/I	B	MINOR	MONITOR (MAINT. RD)
ML328	56-1067	D/I	B	MINOR	ineligible
ML328	56-2019/H	D/I	R	MINOR	MONITOR
ML328	56-2021	I	N	N	MONITOR
ML328	56-2037/H	I	N	N	MONITOR
ML354	55-1413H	D/I	R	MINOR	MONITOR
ML358	55-0722	D/I	R	MINOR	MONITOR
ML384	55-1986	I	R	NEGLIGIBLE	MONITOR
ML387	55-1990/H	D/I	R	MINOR	MONITOR
ML388	55-1990/H	D/I	R	MINOR	MONITOR
ML4	55-2419	I	WC	MINOR	MONITOR
ML4024	54-0776H	I	N	NEGLIGIBLE	MONITOR
ML410	55-0756	D/I	R	MINOR	MONITOR
ML410	55-0758	D/I	R	MINOR	MONITOR
ML415	55-0755	D/I	R	MINOR	MONITOR
ML415	55-2107/H	I	N	N	MONITOR
ML417	**55-1451**	**D/I**	**R**	**MINOR**	**MONITOR**
ML417	**55-1452**	**I**	**N**	**NEGLIGIBLE**	**MONITOR**
ML421	55-1181	I	N	NEGLIGIBLE	MONITOR
ML425	55-0586	D/I	R/C/L	MINOR	MONITOR
ML479	55-1409	D/I	R	MINOR	MONITOR

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
ML491	55-1511	D/I	R/C	MINOR	MONITOR - E
ML491	55-2089	D/I	R	MINOR	MONITOR
ML516	55-1000	NONE	N	N	MONITOR
ML516	55-1001	NONE	N	N	MONITOR
ML552	55-0290	D/I	R	MINOR	RELOCATE
ML556	55-1006	I	N	NEGLIGIBLE	MONITOR
ML584	55-0225/0195	D/I	R	MINOR	MONITOR
ML591	**55-0080**	**D/I**	**R**	**MINOR**	**MONITOR**
ML78	55-2347	I	N	N	MONITOR
ML79	55-2347	I	N	N	MONITOR
ML9	53-1740	I	N	NEGLIGIBLE	MONITOR
ML90	55-1306H	I	N	NEGLIGIBLE	MONITOR
PA39	56-1800/H	D/I	R/C/L	MINOR	MONITOR
PK10	54-0453	NONE	N	N	N
PK10	54-0464	NONE	N	N	N
PK10	54-0476	D/I	R	NEGLIGIBLE	MONITOR
PUB009	55-2391	D/I	R	MINOR	MONITOR
SS01	55-2414	D/I	R	MINOR	MONITOR
SS1000	56-1601	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1000	56-1602	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-1601	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-1602	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-1609	D/I	B	MINOT	MONITOR (MAINT. RD)
SS1002	56-1610	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-1611	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-1768	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1002	56-3070	I	N	NEGLIGIBLE	MONITOR (MAINT. RD)
SS1002	56-3071	I	N	NEGLIGIBLE	MONITOR (MAINT. RD)
SS1004	56-1761	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1004	56-1939	D/I	B	MINOR	MONITOR (MAINT. RD)

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
SS1004	56-1940	D/I	B	MINOR	MONITOR (MAINT. RD)
SS1004	56-1941	D/I	B	MINOR	MONITOR (MAINT. RD)
SS136	55-2348H	D/I	R	MINOR	MONITOR
SS136	55-2349	I	N	NEGLIGIBLE	NONE
SS140	**55-2400H**	**D/I**	**R**	**NEGLIGIBLE**	**MONITOR**
SS150	56-2114/H	D/I	R	MINOR	MONITOR
SS189	55-1526	D/I	R	MINOR	MONITOR
SS199	56-1133	I	N	NEGILIBLE	MONITOR
SS201	56-1107	D/I	R	MINOR	MONITOR
SS210	56-2114/H	D/I	R/C/L	MINOR	MONITOR
SS211	56-2114/H	D/I	R/C/L	MINOR	MONITOR
SS225	55-0694/H	D/I	R/C/L	MINOR	MONITOR
SS227	55-0692	D/I	R	MINOR	MONITOR
SS256	55-0905	D/I	R	MINOR	MONITOR
SS281	55-0049/H	D/I	R/C/L	MINOR	MONITOR
SS282	55-0049/H	D/I	R/C/L	MINOR	MONITOR
SS288	55-1528	NONE	N	N	NONE
SS288	55-1536	NONE	N	N	NONE
SS289	55-0049/H	D/I	R/C/L	MINOR	MONITOR
SS290	55-0049/H	D/I	R/C/L	MINOR	MONITOR
SS309	56-3277	D/I	R	MINOR	MONITOR
SS396	55-2088/H	D/I	R/C/L	MINOR	MONITOR
SS417	55-1567	D/I	R	MINOR	MONITOR
SS418	55-0903	I	N	NEGLIGIBLE	MONITOR
SS420	55-0218	D/I	R	MINOR	MONITOR
SS421	55-0218	D/I	R	MINOR	MONITOR
SS421	55-0989	D/I	R	MINOR	MONITOR
SS432	55-0086	D/I	R	MINOR	MONITOR
SS562	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS564	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS565	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS566	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS567	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS568	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS569	53-0448HA	D/I	R/C/L	MINOR	MONITOR
SS575	53-1053H	D/I	R/L	MINOR	MONITOR
SS579	53-0551	I	C/L	MINOR	MONITOR

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
SS583	**53-0033H**	**D/I**	**R/C/L**	**MINOR**	**MONITOR**
SS589	53-0449H	D/I	R	MINOR	MONITOR
SS590	53-0449H	D/I	R	MINOR	MONITOR
SS591	53-0449H	D/I	R/C/L	MINOR	MONITOR
SS608	53-0559	D/I	R/L	MINOR	MONITOR
SS628	53-0685	NONE	N	N	N
SS633	53-0710	D/I	R	MINOR	MONITOR
SS634	**53-0588/-0622/-0705**	**D/I**	**R/C/L**	**MINOR**	**MONITOR**
SS634	**53-0630**	**NONE**	**N**	**N**	**N**
SS634	**53-1361**	**D/I**	**R**	**MINOR**	**MONITOR**
SS635	**53-0676**	**D/I**	**R**	**MINOR**	**MONITOR**
SS635	**53-1226**	**D/I**	**R**	**MINOR**	**MONITOR**
SS641	53-0632	NONE	N	N	N
SS641	53-0677H	NONE	N	N	N
SS702	53-0185	D/I	R	MINOR	MONITOR
SS725	53-0503H	D/I	R/C/L	MODERATE	SIGN/MONITOR
SS727	53-0765	D/I	R	NEGLIGIBLE	MONITOR
SS736	53-0773	D/I	R	MINOR	MONITOR
SS788	53-0912	D/I	R/C/L	MINOR	MONITOR
SS788	53-1297	D/I	R	MINOR	MONITOR
SS789	53-0054/H	D/I	R	MINOR	MONITOR
SS789	53-0912	D/I	R/C/L	MINOR	MONITOR
SS790	53-0054/H	D/I	R	MINOR	MONITOR
SS790	53-0912	D/I	R/C/L	MINOR	MONITOR
SS792	53-0054/H	D/I	R	MINOR	MONITOR
SS884	53-1119/H	D/I	R	MINOR	MONITOR
SS904	53-0124	I	N	NEGLIGIBLE	MONITOR
SS910	53-0573H	D/I	R/C	MINOR	MONITOR
SS912	53-0573H	D/I	R/C	MINOR	MONITOR
SS931	53-0110	D/I	R/C	MINOR	MONITOR
SS940	53-0100	I	N	NEGLIGIBLE	MONITOR
SS969	56-1571H	D/I	N	N	INELIGIBLE
SS969	56-1576	D/I	R	MINOR	MONITOR
SS978	56-1607	D/I	B	MINOR	MONITOR (MAINT. RD)
SS979	56-1607	D/I	B	MINOR	MONITOR (MAINT. RD)
SS980	56-1570H	N	N	N	INELIGIBLE

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
SS980	56-2908	D/I	R	MINOR	MONITOR
SS983	56-1206	D/I	R	MINOR	MONITOR
SS984	56-1607	D/I	B	MINOR	MONITOR (MAINT. RD)
SS989	56-1601	D/I	B	MINOR	MONITOR (MAINT. RD)
SS989	56-1602	D/I	B	MINOR	MONITOR (MAINT. RD)
SS989	56-1609	D/I	B	MINOR	MONITOR (MAINT. RD)
SS989	56-1610	D/I	B	MINOR	MONITOR (MAINT. RD)
SS990	56-1761	D/I	B	MINOR	MONITOR (MAINT. RD)
SS990	56-1939	D/I	B	MINOR	MONITOR (MAINT. RD)
SS990	56-1940			MINOR	
SS990	56-1941	D/I	B	MINOR	MONITOR (MAINT. RD)
SS991	56-1608	D/I	B	MINOR	MONITOR (MAINT. RD)
SS991	56-3263	D/I	B	MINOR	MONITOR (MAINT. RD)
SS991	56-3270	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-1605	D/I	B	N	INELIGIBLE
SS993	56-1606	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-2053	D/I	B		MONITOR (MAINT. RD)
SS993	56-2804	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-2805	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-2806	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-3053	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-3264	D/I	B	MINOR	MONITOR (MAINT. RD)
SS993	56-3266	D/I	B	MINOR	MONITOR (MAINT. RD)
SS994	56-3053	D/I	B	MINOR	MONITOR (MAINT. RD)
TR50	56-1789H	D/I	R	MINOR	MONITOR
TR50	56-1972H	D/I	R	MINOR	MONITOR

Route ID	Site Number	Type of Effect	Nature of Effect	Severity of Effect	Protection or Mitigation
TR96	56-1026	D/I	R	MINOR	MONITOR

Appendix G: Law Enforcement

Introduction

U.S. Forest Service Law Enforcement and Investigations (LEI) personnel are responsible for protecting the public, employees, natural resources, and other property under the agency's jurisdiction. Additionally, LEI investigates and enforces applicable laws and regulations that affect the National Forest System (NFS) lands, and prevents criminal violations. The new Travel Management Rule is one such regulation.

The Travel Management Rule requires designation of roads, trails, and areas open to motor vehicle use, and the prohibition of cross-country, wheeled motorized vehicle travel by the public. This is a considerable change in public motorized access management from previous conditions, where most forests were managed as "open to cross-country travel." The implementation of designated routes and areas for motorized vehicles will be the responsibility of all agency employees, especially in the area of education and enforcement. The law enforcement program is primarily responsible for issuing violations to the Travel Management Rule.

The national LEI budget is funded by appropriated funds from Congress to provide law enforcement services on the NFS lands. The Travel Management program is one of many forest programs to benefit from federal law enforcement funding. For the past few years, law enforcement funding has increased, and that has translated into an increase in field law enforcement personnel[1].

To enhance enforcement of the Travel Management Rule, Region 5 Forest Recreation Programs have applied for and received grant dollars (green sticker funding) from the State of California Off-Highway Motor Vehicle Recreation Division Grants Program. These State funds are earmarked specifically for enforcement of off-highway vehicle laws and regulations on the various forests, and are performed primarily by Forest Protection Officers (FPO). In addition, Law Enforcement Officers (LEOs) support the FPOs as needed, especially if serious violations have occurred. In recent years, State law enforcement grants have ranged from three to four million dollars annually, with similar funding anticipated for the 2008-2009 grant cycle.

Authority and Jurisdiction

The Forest Service exercises its law enforcement authority when violation of laws or regulations occurs on NFS lands, or when incidents affect the NFS. The existing authorities for enforcement are completely adequate and no new laws will be needed to implement the Travel Management rule.

Every national forest has a law enforcement plan that is updated periodically. All Forest Service employees have a duty to know and understand their authorities and responsibilities, and to properly enforce laws and regulations relating to the forest within their authority and capability. LEI and agency personnel provide a regular and recurring presence on vast amounts of public land, roads, trails, and areas, and take appropriate action if illegal activity is discovered. Violations involving motorized vehicles are enforced by FPOs and LEOs. There may be agreements with local law-enforcement authorities to support Federal enforcement. These include violations such as operating a motor vehicle in violation of federal regulations and California

[1] Region 5 Law Enforcement budget figures for the past four years have increased, and the number of law enforcement officers has increased by 65.

vehicle code, parking improperly, resource damage to soils, vegetation or wildlife, and disorderly or unruly behavior. LEOs have discretion when deciding what type of action to initiate when handling violations to the following federal laws that pertain specifically to motor vehicle use.

- The Act of June 4, 1897 (Title 16 United States Code 551) is the authority for issuing regulations at Title 36 Code of Federal Regulations, Part 261 (36 CFR 261). Specific OHV travel management regulations are in sections 261.9 – Property, 261.13 –Motor Vehicle Use, and 261.15 –Use of Vehicles Off-Road (see Attachment X). These CFRs cover a wide array of misdemeanor infractions.
- The Act of March 3, 1905 (Title 16 United States Code 559) authorizes all employees of the Forest Service to make arrests for violation of the laws and regulations pertaining to national forests. Normally, arrest authority is limited to trained law enforcement personnel. (Any employee may take immediate action when necessary to protect life and prevent serious damage to or destruction of property, escape of a suspect, or loss of material evidence when such action can be done with reasonable safety.)

Cooperation

The Forest Service shares responsibility and cooperates with local, State, and other Federal agencies in the execution of its law enforcement program. The authority for cooperation among agencies, especially as it pertains to Travel Management, is within the following laws:

- The act of August 10, 1971 (Title 16 United States Code 551a) authorizes the Secretary of Agriculture to cooperate with, and provide reimbursement to, any State or political subdivision thereof, for the enforcement of their laws within NFS. This law does not deprive any State or local law enforcement agency from exercising its criminal and civil jurisdiction on lands that are part of the NFS.
- The California Penal Code, Section 830.8, provides that Forest Service law enforcement personnel may exercise State Peace Officer authority where the sheriff of the county wherein the officer works has provided specific written permission for the officer.
- The State vehicle code section 38301 allows State law enforcement officer to enforce any of the Federal Cars related to motor vehicles on NFS lands.[2]

Each forest maintains close working relationships with many State and local law enforcement agencies that have law enforcement responsibilities within or adjacent to the forest boundary. Significant cooperating agencies relative to the Travel Management Rule include the local county sheriff departments, the California Department of Fish and Game, California Highway Patrol, California Department of Forestry and Fire Protection, and occasionally one or more Federal agencies, depending on the violation. Forest Service law enforcement personnel cooperate fully with these agencies in carrying out their law enforcement responsibilities by providing assistance, liaison, advice, and information.

Forests maintain Cooperative Law Enforcement Agreements with their respective county sheriff's office. In Region 5, the total cost for the 2008 Cooperative Law Enforcement Agreements is $891,397.[3] These funds are for performance of duties in addition to the normal activities in which

[2] The State Vehicle code, section 38301. (a) It is unlawful to operate a vehicle in violation of special regulations which have been promulgated by the governmental agency having jurisdiction over public lands, including, but not limited to, regulations governing access, routes of travel, plants, wildlife habitat, water resources and historical sites.

[3] Region 5 Law Enforcement Cooperative Agreement 2008 spreadsheet.

the sheriff's deputies handle crimes against persons and their property that may occur within the NFS boundary. In these agreements, both parties recognize that public use of NFS lands is usually located in areas that are remote or sparsely populated, and the enforcement of State and local law is related to the administration and regulation of NFS lands. Within the Cooperative Law Enforcement Agreements, an Operating Plan is developed outlining the supplemental work to be performed by the cooperating agency. Relative to the Travel Management Rule, operating plans may provide:

- Supplemental patrols in areas of high use
- Supplemental patrols on weekends or during particular months of high use
- Additional officers for large group gatherings or events (e.g., enduros)
- Vehicle checkpoints for vehicle registration spark arrestors, and other miscellaneous items

Implementation and Tracking

Implementation of the Forest Service law enforcement program is continually adapting as law enforcement personnel assess the changing patterns of visitor use and attitudes, and the trends in violations, especially for property and resource damage. One method of assessment is the analysis of Law Enforcement and Investigations Management Attainment Reporting System (LEIMARS) data. LEIMARS tracks all known violations of criminal law or regulation on NFS lands (FSH 5309.11, chapter 40 and FSM 5340). Additionally, imbedded in LEIMARS is the Case Tracking System, which tracks all felony and serious misdemeanor cases.These tracking systems:

- Capture and record information on location, volume, damages, and type of violations occurring on NFS lands
- Provide a retrieval system of data on incidents and violations that is responsive to the needs of all organizational levels
- Provide agency managers with a means to identify and monitor law enforcement activities.
- Specifically identify problem areas and periods of activity
- Provide a method to record and analyze incidents involving violations or suspected violations on NFS lands

Trends in violations related to the Travel Management Rule can be analyzed and appropriate action(s) taken, if needed. Appropriate action(s) may involve one or more techniques or adaptive strategies. In the law enforcement community, this is often referred to as the "three E strategy" of engineering, education, and enforcement. With the change in the Travel Management Rule, it is anticipated that the law enforcement program will use a combination of strategies, especially during the first five years of the rule implementation.

Implementation Strategy

Engineering, Education, and Enforcement

The Engineering strategy is designed to prevent or reduce inadvertent violations, resource damage, and crime vulnerability. The strategy's goal is to remove the opportunity to commit a violation. LEI personnel work with each forest, particularly the recreation and engineering programs, to implement some or all of the following specific tactics:

- Proper design of improvements and facilities
- Facility security measures such as installation of barricades, gates, and other natural obstacles
- Forest signing, both directional and informational, to assist the public to ensure they stay on designated trails, and out of the wilderness and other sensitive areas
- Closure and rehabilitation of decommissioned roads and trails

The Educational strategy focuses on specific user groups, school groups, recreation users, and the public. The goal is to develop responsible and concerned public land use attitudes in forest users; it is violation prevention. Forest LEOs and FPOs make regular contacts in the field, informing the users of the regulations and need for the prohibition. The LEI personnel work with each forest, particularly the recreation and public information programs, to identify and implement some or all of the following specific tactics.

- Have motor vehicle use maps easily available to public
- Have route numbers visually marked on the ground
- Distribute maps and brochures promoting responsible use
- Conduct environmental interpretation activities in local communities, at schools, and with special interest groups
- Use of all forms of the media (television, radio, and newspapers), especially prior to, and during, the high use periods
- Ensure all employees understand the Travel Management Rule
- Use high visibility prevention patrols and public information checkpoints, especially during the peak use periods
- Encourage cooperating law enforcement agencies to make visitor contacts and provide violator information to forest officers
- Ride with other agency officers to demonstrate solidarity to the public
- Issue news releases of arrests and successful prosecutions, including offender names, criminal penalties, and court ordered restitution

The Law Enforcement strategy is to effect crime prevention measures that are designed to reduce specific criminal activity, deter potential and repeat offenders, maximize enforcement actions and visibility, and increase prosecutorial successes. All enforcement actions should result in a better understanding of regulations pertaining to the management of NFS lands. LEI personnel work with each forest, to identify and implement some or all of the following specific tactics:

- Schedule officers to work during the identified problem periods, including holidays and weekends
- Use high-profile “saturation patrols” and stationary surveillance posts in the identified problem areas
- Use the most effective and efficient means of patrol, including foot, horseback, all-terrain vehicle, snowmobile, watercraft, and aircraft
- Use aerial overflights to enforce restriction under Travel Management Rule
- Enlist the aid of volunteers

- Initiate an awards program
- Supplement patrols with cooperating law enforcement agencies in areas of concern
- Use technical investigative equipment (cameras, monitors, sensors) to assist officers with detecting and monitoring violations at known or suspected violation sites
- Conduct planned and approved compliance checkpoints
- Follow up on complaints to document violations, damages, and identify suspect vehicles or persons
- Require cooperating law enforcement agencies to assist with reporting and/or enforcing violations within their authority
- Patrol with other cooperating law enforcement agency officers
- Conduct unpredictable patrol schedules
- Conduct special enforcement actions (unmarked vehicle deployment, surveillance, traffic checkpoints)
- Use LEIMARS and Central Violations Bureau databases along with the State motor vehicle data, to identify repeat offenders for enhanced prosecution
- Pursue court ordered restitution or civil collections for resource and property damages.
- Encourage prosecutorial and judicial support
- Execute bench warrants related of off-highway vehicle violations

Assumptions

Based on many years of enforcing off-highway vehicles, implementation of the Travel Management Rule from a law enforcement perspective assumes the following to be true. Additionally, these assumptions are based on several case studies in R5 (see Attachment 1). These assumptions may change in time with analysis of the LEIMARS database.

Enforcement Assumptions

- Enforcement of the laws and regulations related to Travel Management will be enforced equally in authority and weight as with all other Federal laws and regulations.
- As with any change in a regulation on NFS lands, there is usually a transitional period for the public to understand the changes. It is anticipated there will be a higher number of violations to the Travel Management Rule the first few years and the number of violations will decline as the users understand and comply with the rules. It is assumed :

  Users in communities adjacent to the forest will comply within one to two years.

  Frequent users but further in distant from the forest will comply within two to three years.

  Infrequent users, regardless of distance, may take up to five years to comply.
- Law enforcement officer and agency personnel's presence and enforcement actions will positively affect OHV users' behaviors and attitudes.
- The Travel Management Rule and associated motor vehicle use map clearly define the designated routes. Therefore, there would be no doubt about violations.

- Once the motor use vehicle map is published, the implementation of the established dedicated network of roads, trails, and areas with signs, and user education programs, will reduce the number of violations.
- FPOs spend a large percentage of their time on Travel Management issues, and depending on the forest the estimate range from 30 to 50 percent. LEOs spend approximately 10 to 20 percent of their time on enforcement of off-highway vehicle issues.[4]

Agency Funding Assumptions

Appropriated program funding levels and number of law enforcement personnel does not affect enforcement of the Travel Management Rule. All laws and regulations are enforced equally.

Appropriated funds will remain level or increase slightly in the next five years.

The State of California Off-Highway Motor Vehicle Recreation Division Grants Program (green sticker funding) enhances and provides additional law enforcement presence in the field at the forest level.

Public Attitude and Compliance Assumptions

- Forest users want to do the right thing and will obey the rule[5], once they understand the rule and motor vehicle use map.
- User compliance[6] is based on the State of California Off-Highway Motor Vehicle Recreation Division data and is anticipated to be as follows:

  95 percent of the users are fully compliant.

  2 to 3 percent of the users think about and may violate a law.

  1 to 2 percent of the users will violate the law.

Measures of Success

Measuring the success of the Travel Management Rule from a law enforcement perspective will be done using the LEIMARS database. An analysis of the data may alert a forest to a particular problem area for violations, such as a group campsite area that may be surrounded by flat meadow areas inviting riders to potentially violate the regulation. A successful program will see a positive change in the following measures:

- Measure 1: A reduction in the number of off-route travel violations
- Measure 2: A reduction in the number of resource damage violations

[4] Barnett, G. 2004-2005 Law Enforcement Workload Analysis.

[5] Tyler, Tom R. *Why People Obey the Law,* Princeton University Press, 2006, p. 320

[6] User compliance was computed by using the State Vehicular Recreation Area Fiscal year 2006/2007 data: 4.2M SVRA visitors divided by the 210,000 citations written, is approximately 5 percent non-compliant, and 95% compliant.

Appendix H: Information on Maintenance Backlog

The table below (Table K-1) shows the deferred maintenance backlog for our maintenance level (ML) 3,4, and 5 roads. It is based on condition surveys done on 98.46% of ML 3 roads and 100% of ML 4&5 roads; the reporting year was 2007. The remaining 1.54% of the ML 3 roads was extrapolated from the ones that were done. It shows a deferred maintenance backlog of $9,087,533 for the ML 3,4, and 5 roads.

For the ML 1 and 2 roads, condition surveys have only been done on a very small percentage (0.09%), so this data is not valid to extrapolate to the remainder. Most of the ML 1 and 2 roads do not need much work. The deferred maintenance on these roads is about $500 per mile. This is based on almost all of them needing a route marker installed, and some minor drainage or clearing work. The current number of miles, based on objective maintenance levels, is 3,491 miles of ML 2 and 256 miles of ML 1. At $500 per mile, the deferred maintenance estimate for ML 1&2 roads is $1,873,500.

The total deferred maintenance estimate for roads is then $10,961,033, or in round numbers $11,000,000.

Figure K-1. Data on Maintenance Backlog (2007 data)

Maint. level	All miles	Existing miles	Sample miles	Sample percent	Reason	Priority	Needed funds	Extrapolated funds
3	703.4	703.4	692.565	98.46	forest mission	critical	18,6400	2,915
3	703.4	703.4	692.565	98.46	forest mission	non-critical	1160,755	18,155
3	703.4	703.4	692.565	98.46	health and safety	critical	260,240	4,070
3	703.4	703.4	692.565	98.46	health and safety	non-critical	91,120	1,425
3	703.4	703.4	692.565	98.46	resource protection	critical	50,391	788
3	703.4	703.4	692.565	98.46	resource protection	non-critical	6795,671	106,290
4	13.09	13.09	13.09	100	forest mission	non-critical	19,325	0
4	13.09	13.09	13.09	100	health and safety	critical	812	0
4	13.09	13.09	13.09	100	health and safety	non-critical	311	0
4	13.09	13.09	13.09	100	resource protection	non-critical	292,406	0
5	18.364	18.364	18.364	100	forest mission	non-critical	16,025	0
5	18.364	18.364	18.364	100	health and safety	critical	678	0
5	18.364	18.364	18.364	100	health and safety	non-critical	756	0
5	18.364	18.364	18.364	100	resource protection	critical	148	0
5	18.364	18.364	18.364	100	resource protection	non-critical	78,850	0
Totals							$8,953,888	$133,645
Total of needed and extrapolated funds for ML 3,4, &5 roads								$9,087,533

Total of deferred maintenance estimate for ML 1&2 roads	$1,873,500
Total of deferred maintenance estimate for all roads	$10,961,033

Appendix I: Goshawk Habitat I

Table L-1. Goshawk Habitat Influence Index And Security Index Rank And Ratings Where There Are At Least 200 Acres Of NFS Within The Watershed (HUC)—Alternative 1

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Acres of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Ballard Reservoir	12852.6	2270.5	1046.9	46%	155.7	15%	Low	561.2	46%	High
Bare Creek	33440.5	7599.1	2883.6	38%	312.0	11%	Low	1181.9	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1042.3	13%	Low	3543.0	57%	Moderate
Blacks Canyon	23132.0	14454.7	277.7	2%	54.0	19%	Low	204.0	27%	High
Canby-Pit River	38873.0	12359.7	767.8	6%	134.7	18%	Low	392.6	49%	High
Corral Creek	16487.0	5304.0	429.3	8%	48.4	11%	Low	166.2	61%	Moderate
Cottonwood Creek - North	25038.1	12896.4	8071.5	63%	1237.9	15%	Low	3663.6	55%	Moderate
Cottonwood Creek- South	16350.0	11917.6	3792.6	32%	657.1	17%	Low	2389.1	37%	High
Crooks Canyon	25109.4	3944.1	2109.9	53%	255.1	12%	Low	1053.1	50%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1318.0	19%	Low	4342.0	38%	High
Dry Creek	28886.1	2403.3	603.6	25%	44.2	7%	Low	198.7	67%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	105.7	7%	Low	364.8	76%	Low
East Creek	29458.5	29035.7	6007.4	21%	922.4	15%	Low	3054.2	49%	High
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	95.6	19%	Low	298.8	40%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Acres of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1059.6	16%	Low	3257.5	51%	Moderate
Frog Waterhole	42760.7	37927.7	267.9	1%	52.2	19%	Low	162.2	39%	High
Gleason Creek	10621.3	1501.5	235.9	16%	21.2	9%	Low	60.7	74%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	457.1	17%	Low	1682.0	37%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	190.4	15%	Low	686.8	44%	High
Joseph Creek	12321.5	8231.6	4303.8	52%	516.8	12%	Low	1867.4	57%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	379.9	16%	Low	1346.5	44%	High
Lassen Creek	15654.3	12749.1	5600.3	44%	1151.1	21%	Low	3695.8	34%	High
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24%	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	502.6	18%	Low	1771.3	37%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	534.9	23%	Low	1604.6	32%	High
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	47.5	23%	Low	156.5	26%	High
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	676.3	14%	Low	2155.7	55%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	70.0	12%	Low	260.7	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	186.5	6%	Low	720.7	77%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	664.9	21%	Low	2030.2	35%	High
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.5	16%	Low	183.2	35%	High
Mill Creek	22288.0	19190.5	9778.6	51%	735.2	8%	Low	2898.2	70%	Moderate
Moon Lake	46904.6	4084.5	831.7	20%	64.2	8%	Low	267.4	68%	Moderate
Mud Lake	9119.1	5948.9	207.5	3%	42.7	21%	Low	127.5	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	493.4	7%	Low	1779.5	76%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Acres of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	641.0	15%	Low	2007.3	54%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2510.3	19%	Low	8497.3	35%	High
Parker Creek	22262.2	6240.5	1822.8	29%	207.4	11%	Low	699.9	62%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	164.5	16%	Low	488.2	53%	Moderate
Pine Creek south	19547.9	11943.3	6114.8	51%	478.9	8%	Low	1808.4	70%	Low
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	244.9	24%	Low	629.4	38%	High
Rose Canyon	18125.5	13713.9	1392.9	10%	149.8	11%	Low	544.4	61%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	585.6	24%	Low	1807.0	27%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1693.8	19%	Low	5363.5	39%	High
Sohonchin Spring	13229.0	12795.7	6164.5	48%	892.4	14%	Low	2734.5	56%	Moderate
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	252.2	19%	Low	864.0	34%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	245.4	24%	Low	665.0	35%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1878.7	20%	Low	5490.6	41%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	115.9	19%	Low	391.0	36%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	295.6	7%	Low	899.2	80%	Low
Stone Coal Creek	29094.8	25094.9	3610.2	14%	583.8	16%	Low	2091.3	42%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	457.8	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	112.8	4%	Low	499.9	82%	Low
Tionesta	77495.1	66514.8	2304.1	3%	367.5	16%	Low	1187.5	48%	High
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	227.3	19%	Low	842.3	30%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Acres of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.5	14%	Low	217.4	61%	Moderate
Upper Turner Creek	15941.5	14868.8	251.0	2%	46.8	19%	Low	150.1	40%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	13.0	2%	Low	89.9	87%	Low
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	494.3	11%	Low	1484.0	68%	Moderate
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.7	17%	Low	218.7	49%	High
Wagontire Creek	26475.3	11980.5	268.9	2%	69.8	26%	Low	199.7	26%	High
Washington Creek	21999.0	21789.9	377.5	2%	65.8	17%	Low	289.6	23%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	286.6	10%	Low	980.8	67%	Moderate
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	148.5	9%	Low	538.2	68%	Moderate
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1645.8	18%	Low	5757.5	37%	High
Willow Creek DH	38896.9	4421.5	363.7	8%	110.6	30%	Moderate	291.0	20%	High
Willow Creek WM	23817.6	14809.7	4758.2	32%	439.5	9%	Low	1666.8	65%	Moderate

Table L-2. Goshawk Habitat Influence Index And Security Index Rank And Ratings Where There Are At Least 200 Ac Of NFS Within The Watershed (HUC)—Alternatives 2 And 5

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	322.8	11%	Low	1177.8	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1084.1	13%	Low	3696.4	55%	Moderate
Blacks Canyon	23132.0	14454.7	277.7	2%	53.8	19%	Low	180.1	35%	High
Canby-Pit River	38873.0	12359.7	767.8	6%	50.3	7%	Low	196.0	74%	Low
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek N	25307.1	12896.4	8071.5	63%	1315.8	16%	Low	3802.6	53%	Moderate
Cottonwood Creek S	16350.0	11917.6	3792.6	32%	649.9	17%	Low	2331.7	39%	High
Crooks Canyon	25109.4	3944.1	2109.9	53%	283.0	13%	Low	1065.0	50%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1250.2	18%	Low	4119.0	41%	High
Dry Creek	28886.1	2403.3	603.6	25%	66.7	11%	Low	277.5	54%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100%	Low
East Creek	29458.5	29035.7	6007.4	21%	830.1	14%	Low	2791.8	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18%	Low	265.6	47%	High
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.6	17%	Low	3370.7	49%	High
Frog Waterhole	42760.7	37927.7	267.9	1%	52.2	19%	Low	162.2	39%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low

Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	424.1	16%	Low	1601.5	40%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	419.3	17%	Low	1445.3	40%	High
Lassen Creek	15654.3	12749.1	5600.3	44%	950.4	17%	Low	3317.0	41%	High
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24%	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	556.0	12%	Low	1827.5	62%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	156.9	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	646.4	21%	Low	1969.5	37%	High
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.0	16%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.1	7%	Low	1836.3	75%	Low
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	555.5	13%	Low	1850.1	57%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2576.2	20%	Low	8862.8	32%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	183.1	18%	Low	533.8	48%	High
Pine Creek south	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High

Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	537.8	22%	Low	1754.3	29%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Sohonchin Spring	13229.0	12795.7	6164.5	48%	719.9	12%	Low	2417.6	61%	Moderate
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	226.0	22%	Low	643.7	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1925.8	21%	Low	5517.6	40%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	0.0	0%	Low	0.0	100%	Low
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	454.9	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	434.4	19%	Low	1417.5	38%	High
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	438.5	9%	Low	1370.8	70%	Moderate
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Washington Creek	21999.0	21789.9	377.5	2%	61.5	16%	Low	278.4	26%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	411.3	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1668.0	18%	Low	5899.7	35%	High
Willow Creek DH	38896.9	4421.5	363.7	8%	103.0	28%	Low	284.0	22%	High

Willow Creek WM	23817.6	14809.7	4758.2	32%	446.8	9%	Low	1665.5	65%	Moderate

Table L-3. Goshawk Habitat Influence Index And Security Index Rank And Ratings Where There Are At Least 200 Acres Of NFS Within The Watershed (HUC)—Alternative 3

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	317.3	11%	Low	1161.3	60%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1002.5	12%	Low	3581.3	57%	Moderate
Blacks Canyon	23132.0	14454.7	277.7	2%	53.7	19%	Low	176.4	36%	High
Canby-Pit River	38873.0	12359.7	767.8	6%	49.7	6%	Low	196.0	74%	Low
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek - North	25037.1	12896.4	8071.5	63%	1251.2	16%	Low	3774.1	53%	Moderate
Cottonwood Creek-South	16350.0	11917.6	3792.6	32%	648.7	17%	Low	2331.7	39%	High
Crooks Canyon	25109.4	3944.1	2109.9	53%	261.7	12%	Low	995.3	53%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1209.4	17%	Low	3990.0	43%	High
Dry Creek	28886.1	2403.3	603.6	25%	64.5	11%	Low	270.5	55%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100%	Low
East Creek	29458.5	29035.7	6007.4	21%	809.3	13%	Low	2756.4	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18%	Low	265.6	47%	High
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.0	17%	Low	3370.7	49%	High
Frog Waterhole	42760.7	37927.7	267.9	1%	52.1	19%	Low	158.2	41%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	401.9	15%	Low	1545.5	42%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	405.1	17%	Low	1412.5	42%	High
Lassen Creek	15654.3	12749.1	5600.3	44%	848.7	15%	Low	3055.3	45%	High
Lone Pine Butte	23296.6	23296.6	340.9	1%	79.5	23%	Low	230.4	32%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	502.5	11%	Low	1700.6	64%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	23977.2	8602.8	3138.2	36%	156.9	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	646.4	21%	Low	1969.5	37%	High
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	43.8	15%	Low	182.1	36%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.0	7%	Low	1835.9	75%	Low
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	520.1	12%	Low	1761.8	60%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2454.7	19%	Low	8625.8	34%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	179.0	17%	Low	524.7	49%	High
Pine Creek South	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	482.4	19%	Low	1614.5	35%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Sohonchin Spring	13229.0	12795.7	6164.5	48%	708.9	11%	Low	2389.9	61%	Moderate
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	225.7	22%	Low	643.4	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1703.4	18%	Low	5103.3	45%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	0.0	0%	Low	0.0	100%	Low
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	453.4	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	395.5	17%	Low	1322.4	43%	High
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	349.6	8%	Low	1291.9	72%	Low
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Washington Creek	21999.0	21789.9	377.5	2%	57.7	15%	Low	266.6	29%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	409.8	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1565.7	17%	Low	5658.6	38%	High
Willow Creek DH	38896.9	4421.5	363.7	8%	90.5	25%	Low	279.3	23%	High
Willow Creek WM	23817.6	14809.7	4758.2	32%	420.9	9%	Low	1607.1	66%	Moderate

Table L-4. Goshawk Habitat Influence Index And Security Index Rank And Ratings Where There Is At Least 200 Ac Of NFS Within The Watershed (HUC) Alternative 4

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	322.8	11%	Low	1177.8	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1065.0	13%	Low	3643.7	56%	Moderate
Blacks Canyon	23132.0	14454.7	277.7	2%	53.7	19%	Low	176.7	36%	High
Canby-Pit River	38873.0	12359.7	767.8	6%	50.3	7%	Low	196.0	74%	Low
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek - South	16350.0	11917.6	3792.6	32%	815.8	22%	Low	2331.7	39%	High
Cottonwood Creek- North	25037.1	12896.4	8071.5	63%	1413.7	18%	Low	3802.0	53%	Moderate
Crooks Canyon	25109.4	3944.1	2109.9	53%	283.0	13%	Low	1065.0	50%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1250.2	18%	Low	4118.0	41%	High
Dry Creek	28886.1	2403.3	603.6	25%	66.7	11%	Low	277.5	54%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100%	Low
East Creek	29458.5	29035.7	6007.4	21%	830.1	14%	Low	2791.8	54%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18%	Low	265.6	47%	High
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.6	17%	Low	3370.7	49%	High
Frog Waterhole	42760.7	37927.7	267.9	1%	52.2	19%	Low	162.2	39%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	424.1	16%	Low	1601.5	40%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	411.8	17%	Low	1417.4	41%	High
Lassen Creek	15654.3	12749.1	5600.3	44%	942.1	17%	Low	3293.0	41%	High
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24%	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	523.5	11%	Low	1724.2	64%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	157.1	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	676.3	22%	Low	1969.5	37%	High
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.0	16%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.1	7%	Low	1836.3	75%	Low
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	550.0	13%	Low	1844.2	58%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2575.5	20%	Low	8862.8	32%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	183.1	18%	Low	533.8	48%	High
Pine Creek south	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	537.8	22%	Low	1754.3	29%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Sohonchin Spring	13229.0	12795.7	6164.5	48%	719.9	12%	Low	2417.6	61%	Moderate
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	226.0	22%	Low	643.7	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1885.9	20%	Low	5436.7	41%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	0.0	0%	Low	0.0	100%	Low
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	454.9	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	402.7	17%	Low	1329.9	42%	High
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	434.2	9%	Low	1362.1	71%	Low
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Washington Creek	21999.0	21789.9	377.5	2%	59.3	16%	Low	272.4	28%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	409.8	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1664.9	18%	Low	5899.7	35%	High
Willow Creek DH	38896.9	4421.5	363.7	8%	103.0	28%	Low	284.0	22%	High
Willow Creek WM	23817.6	14809.7	4758.2	32%	437.0	9%	Low	1638.5	66%	Moderate

Appendix J: Goshawk Habitat II

Table M-1. Goshawk Habitat Influence Index And Security Index Rank And Ratings By Watershed (HUC) For Alternative 4

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Above Weed Valley Reservoir	33815.8	7912.3	60.2	1%	3.9	7%	Low	26.3	56%	Moderate
Antelope Reservoir	21849.9	21510.7	0.0							
Armentrout Flat	20083.0	3627.3	115.6	3%	22.4	19%	Low	77.0	33%	High
Badger Basin	34607.9	0.2	0.1	64%	0.0	0%	Low	0.0	95%	Low
Baker And Thomas Reservoirs	25280.6	24969.8	0.0							
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	322.8	11%	Low	1177.8	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1065.0	13%	Low	3643.7	56%	Moderate
Big And Little Juniper Creeks	21384.9	1947.1	0.0	0%						
Big Sage Reservoir	25584.6	24600.	0.0	0%						

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
		3								
Big Swamp	30138.3	2214.6	75.5	3%	0.0	0%	Low	0.8	99%	Low
Blacks Canyon	23132.0	14454.7	277.7	2%	53.7	19%	Low	176.7	36%	High
Boles Meadow	26436.8	25317.5	0.0	0%						
Butte Creek	24861.6	4262.5	52.8	1%	0.2	0%	Low	8.4	84%	Low
Canby-Pit River	38873.0	12359.7	767.8	6%	50.3	7%	Low	196.0	74%	Low
Clarks Valley	10505.3	1347.6	0.0	0%						
Clear Lake Inflow Northwest	57800.1	30184.4	0.0	0%						
Clear Lake Inflow South	28788.8	27795.1	4.1	0%	0.0	0%	Low	2.5	38%	High
Copic	17513.1	1109.8	0.0	0%						
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek - South	16350.0	11917.6	3792.6	32%	815.8	22%	Low	2331.7	39%	High
Cottonwood Creek- North	25037.1	12896.4	8071.5	63%	1413.7	18%	Low	3802.0	53%	Moderate
Crooks Canyon	25109.4	3944.1	2109.9	53%	283.0	13%	Low	1065.0	50%	Moderate
Davis Creek	21933.7	12159.	7010.	58	1250.	18	Low	4118.	41%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
		8	9	%	2	%		0		
Delta Lake	19024.5	1130.9	198.7	18 %	1.6	1%	Low	19.3	90%	Low
Dobe Swale	14554.1	7931.0	3.6	0%	1.6	44 %	Moderate	3.6	0%	High
Double Head Mountain	35306.3	33297.2	0.0	0%						
Dry Creek	28886.1	2403.3	603.6	25 %	66.7	11 %	Low	277.5	54%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29 %	0.0	0%	Low	0.0	100 %	Low
East Branch Lost River	17249.0	3712.1	0.0	0%						
East Creek	29458.5	29035.7	6007.4	21 %	830.1	14 %	Low	2791.8	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18 %	Low	265.6	47 %	High
East Tule Lake Valley	45783.3		0.0							
Egg Lake	20200.5	5024.6	23.1	0%	2.9	13 %	Low	10.1	56 %	Moderate
Fairchild Swamp	18700.9	18700.9	8.2	0%	0.5	7%	Low	3.2	61 %	Moderate
Fitzhugh Creek	24606.2	13146.2	6611.1	50 %	1119.6	17 %	Low	3370.7	49 %	High
Frog Waterhole	42760.7	37927	267.9	1%	52.2	19	Low	162.	39	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
		.7				%		2	%	
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	424.1	16%	Low	1601.5	40%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High
Ingall Swamp	19565.1	18496.6	0.0	0%						
Jim Creek	16455.2	1476.0	86.5	6%	41.7	48%	Moderate	72.3	16%	High
Jim Horn Ranch	11225.8	1953.4	0.0	0%						
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	411.8	17%	Low	1417.4	41%	High
Knobcone Butte	24308.1	23740.8	41.0	0%	4.5	11%	Low	19.2	53%	Moderate
Laird Landing	21728.6	9695.4	4.3	0%	0.0	0%	Low	0.0	100%	Low
Lake Annie	13828.9	2764.9	106.7	4%	5.1	5%	Low	29.5	72%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Lassen Creek	15654.3	12749.1	5600.3	44%	942.1	17%	Low	3293.0	41%	High
Little Willow Creek	14137.6	14137.6	5.4	0%	0.0	0%	Low	1.9	65%	Moderate
Logan Slough	37400.2	37174.0	0.0	0%						
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24%	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Boles Creek	18618.9	18167.4	0.0	0%						
Lower Clover Swale Creek	21268.8	9988.9	0.0	0%						
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower Juniper Creek	12008.4	4783.8	167.5	4%	28.0	17%	Low	105.4	37%	High
Lower North Fork Pit River	14755.2	6714.9	0.0	0%						
Lower North Fork Willow	25207.5	24565	28.1	0%	9.3	33	Modera	21.3	24	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Creek		.4				%	te		%	
Lower Rattlesnake Creek	16275.2	6124.1	0.0	0%						
Lower Warm Springs Valley	17963.2	239.2	0.0	0%						
Lower West Shore Goose Lake	37205.9	27165.4	105.0	0%	4.6	4%	Low	19.8	81%	Low
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	523.5	11%	Low	1724.2	64%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	157.1	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	676.3	22%	Low	1969.5	37%	High
Middle Ash Creek	13389.5	1802.4	6.3	0%	0.0	0%	Low	0.0	100%	Low
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.0	16%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mosquito Creek-Bayley Tank	24712.7	16429.9	116.4	1%	13.7	12%	Low	57.6	51%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Mowitz Creek	56660.1	49739.1	67.0	0%	13.9	21%	Low	52.5	22%	High
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.1	7%	Low	1836.3	75%	Low
North Of Horse Mountain	18038.2		0.0							
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	550.0	13%	Low	1844.2	58%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2575.5	20%	Low	8862.8	32%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	183.1	18%	Low	533.8	48%	High
Pine Creek	23614.0	53.2	19.2	36%	0.0	0%	Low	0.0	100%	Low
Pine Creek south	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Pothole Valley	14309.8	13836.3	4.6	0%	1.4	30%	Moderate	4.6	0%	High
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Rimrock Lake	14873.4	14873.4	0.0	0%						
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High
Rock Creek	45912.5	25091.3	0.2	0%	0.0	0%	Low	0.0	100%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	537.8	22%	Low	1754.3	29%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Said Valley Reservoir	13108.8	3489.5	9.5	0%	0.0	0%	Low	3.9	59%	Moderate
Service Gulch	18142.2	2729.6	144.9	5%	22.6	16%	Low	83.6	42%	High
Sheep Camp	31128.3	25256.6	0.0	0%						
Sohonchin Spring	13229.0	12795.7	6164.5	48%	719.9	12%	Low	2417.6	61%	Moderate
South Big Swamp	16003.7	3110.1	115.5	4%	23.9	21%	Low	80.2	31%	High
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	226.0	22%	Low	643.7	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1885.9	20%	Low	5436.7	41%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle	38038.8	18510.	4415.	24	0.0	0%	Low	0.0	100	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Alkali Lake		5	2	%					%	
Spaulding Butte	30032.1	29123.0	4.7	0%	0.0	0%	Low	0.0	100%	Low
Spooner Trough Canyon	15242.2	197.1	0.0	0%						
Steele Swamp	16340.4	13486.5	158.2	1%	20.6	13%	Low	92.2	42%	High
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	454.9	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	402.7	17%	Low	1329.9	42%	High
Upper Ash Valley	34892.9	7022.4	70.1	1%	8.9	13%	Low	35.3	50%	Moderate
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Fletcher Creek	11239.4	11205.6	4.1	0%	0.0	0%	Low	0.0	100%	Low
Upper Lost River	31724.4		0.0							
Upper Lost River Frontal	16716.6	14139.3	0.0							

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper Warm Springs Valley	26074.7	7425.9	0.0							
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	434.2	9%	Low	1362.1	71%	Low
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Van Sickle Lake	37251.5	4344.5	0.0	0%						
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Warm Creek	27773.8	8806.2	21.9	0%	7.6	35%	Moderate	16.7	24%	High
Washington Creek	21999.0	21789.9	377.5	2%	59.3	16%	Low	272.4	28%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	409.8	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1664.9	18%	Low	5899.7	35%	High
Wild Horse Creek	17140.2	9775.5	63.7	1%	0.7	1%	Low	34.1	47%	High
Wiley Ranch	45208.7		0.0							

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Willow Creek DH	38896.9	4421.5	363.7	8%	103.0	28 %	Low	284.0	22%	High
Willow Creek WM	23817.6	14809.7	4758.2	32 %	437.0	9%	Low	1638.5	66%	Moderate

Table M-2. Goshawk Habitat Influence Index and Security Index Rank and Ratings by Watershed (HUC) for Alternatives 2 and 5

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Above Weed Valley Reservoir	33815.8	7912.3	60.2	1%	6.7	11%	Low	30.3	50%	Moderate
Antelope Reservoir	21849.9	21510.7	0.0							
Armentrout Flat	20083.0	3627.3	115.6	3%	22.4	19%	Low	77.0	33%	High
Badger Basin	34607.9	0.2	0.1	64%	0.0	0%	Low	0.0	95%	Low
Baker And Thomas Reservoirs	25280.6	24969.8	0.0							
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	322.8	11%	Low	1177.8	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1084.1	13%	Low	3696.4	55%	Moderate
Big And Little Juniper Creeks	21384.9	1947.1	0.0	0%						
Big Sage Reservoir	25584.6	24600.3	0.0	0%						
Big Swamp	30138.3	2214.6	75.5	3%	0.0	0%	Low	0.8	99%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Blacks Canyon	23132.0	14454.7	277.7	2%	53.8	19%	Low	180.1	35%	High
Boles Meadow	26436.8	25317.5	0.0	0%						
Butte Creek	24861.6	4262.5	52.8	1%	0.2	0%	Low	8.4	84%	Low
Canby-Pit River	38873.0	12359.7	767.8	6%	50.3	7%	Low	196.0	74%	Low
Clarks Valley	10505.3	1347.6	0.0	0%						
Clear Lake Inflow Northwest	57800.1	30184.4	0.0	0%						
Clear Lake Inflow South	28788.8	27795.1	4.1	0%	0.0	0%	Low	2.5	38%	High
Copic	17513.1	1109.8	0.0	0%						
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek N	25307.1	12896.4	8071.5	63%	1315.8	16%	Low	3802.6	53%	Moderate
Cottonwood Creek S	16350.0	11917.6	3792.6	32%	649.9	17%	Low	2331.7	39%	High
Crooks Canyon	25109.4	3944.1	2109.9	53%	283.0	13%	Low	1065.0	50%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1250.2	18%	Low	4119.0	41%	High
Delta Lake	19024.5	1130.9	198.7	18%	1.6	1%	Low	19.3	90%	Low
Dobe Swale	14554.1	7931.0	3.6	0%	1.6	44%	Moderate	3.6	0%	High
Double Head Mountain	35306.3	33297.2	0.0	0%						
Dry Creek	28886.1	2403.3	603.6	25%	66.7	11%	Low	277.5	54%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100%	Low
East Branch Lost River	17249.0	3712.1	0.0	0%						
East Creek	29458.5	29035.7	6007.4	21%	830.1	14%	Low	2791.8	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18%	Low	265.6	47%	High
East Tule Lake Valley	45783.3		0.0							
Egg Lake	20200.5	5024.6	23.1	0%	2.9	13%	Low	10.1	56%	Moderate
Fairchild Swamp	18700.9	18700.9	8.2	0%	0.5	7%	Low	3.2	61%	Moderate
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.6	17%	Low	3370.7	49%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Frog Waterhole	42760.7	37927.7	267.9	1%	52.2	19%	Low	162.2	39%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	424.1	16%	Low	1601.5	40%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High
Ingall Swamp	19565.1	18496.6	0.0	0%						
Jim Creek	16455.2	1476.0	86.5	6%	41.7	48%	Moderate	72.3	16%	High
Jim Horn Ranch	11225.8	1953.4	0.0	0%						
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	419.3	17%	Low	1445.3	40%	High
Knobcone Butte	24308.1	23740.8	41.0	0%	6.0	15%	Low	28.5	31%	High
Laird Landing	21728.6	9695.4	4.3	0%	0.0	0%	Low	0.0	100%	Low
Lake Annie	13828.9	2764.9	106.7	4%	5.1	5%	Low	29.5	72%	Low
Lassen Creek	15654.3	12749.1	5600.3	44%	950.4	17%	Low	3317.0	41%	High
Little Willow Creek	14137.6	14137.6	5.4	0%	0.0	0%	Low	1.9	65%	Moderate
Logan Slough	37400.2	37174.0	0.0	0%						
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24%	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Boles Creek	18618.9	18167.4	0.0	0%						
Lower Clover Swale Creek	21268.8	9988.9	0.0	0%						
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower Juniper Creek	12008.4	4783.8	167.5	4%	28.0	17%	Low	105.4	37%	High
Lower North Fork Pit River	14755.2	6714.9	0.0	0%						
Lower North Fork Willow Creek	25207.5	24565.4	28.1	0%	9.3	33%	Moderate	21.3	24%	High
Lower Rattlesnake Creek	16275.2	6124.1	0.0	0%						

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Lower Warm Springs Valley	17963.2	239.2	0.0	0%						
Lower West Shore Goose Lake	37205.9	27165.4	105.0	0%	4.6	4%	Low	19.8	81%	Low
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	556.0	12%	Low	1827.5	62%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	156.9	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	646.4	21%	Low	1969.5	37%	High
Middle Ash Creek	13389.5	1802.4	6.3	0%	0	0%	Low	0.0	100%	Low
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.0	16%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mosquito Creek-Bayley Tank	24712.7	16429.9	116.4	1%	13.7	12%	Low	57.6	51%	Moderate
Mowitz Creek	56660.1	49739.1	67.0	0%	13.9	21%	Low	52.5	22%	High
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.1	7%	Low	1836.3	75%	Low
North Of Horse Mountain	18038.2		0.0							
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	555.5	13%	Low	1850.1	57%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2576.2	20%	Low	8862.8	32%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	183.1	18%	Low	533.8	48%	High
Pine Creek	23614.0	53.2	19.2	36%	0.0	0%	Low	0.0	100%	Low
Pine Creek south	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Pothole Valley	14309.8	13836.3	4.6	0%	1.4	30%	Moderate	4.6	0%	High
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Rimrock Lake	14873.4	14873.4	0.0	0%						

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Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High
Rock Creek	45912.5	25091.3	0.2	0%	0.0	0%	Low	0.0	100%	Low
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	537.8	22%	Low	1754.3	29%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Said Valley Reservoir	13108.8	3489.5	9.5	0%	0.0	0%	Low	3.9	59%	Moderate
Service Gulch	18142.2	2729.6	144.9	5%	22.6	16%	Low	83.6	42%	High
Sheep Camp	31128.3	25256.6	0.0	0%						
Sohonchin Spring	13229.0	12795.7	6164.5	48%	719.9	12%	Low	2417.6	61%	Moderate
South Big Swamp	16003.7	3110.1	115.5	4%	23.9	21%	Low	80.2	31%	High
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	226.0	22%	Low	643.7	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1925.8	21%	Low	5517.6	40%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	0.0	0%	Low	0.0	100%	Low
Spaulding Butte	30032.1	29123.0	4.7	0%	0.0	0%	Low	0.0	100%	Low
Spooner Trough Canyon	15242.2	197.1	0.0	0%						
Steele Swamp	16340.4	13486.5	158.2	1%	20.6	13%	Low	93.0	41%	High
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	454.9	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	434.4	19%	Low	1417.5	38%	High
Upper Ash Valley	34892.9	7022.4	70.1	1%	8.9	13%	Low	35.3	50%	Moderate
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Fletcher Creek	11239.4	11205.6	4.1	0%	0.0	0%	Low	0.0	100%	Low
Upper Lost River	31724.4		0.0							
Upper Lost River Frontal	16716.6	14139.3	0.0							
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper Warm Springs Valley	26074.7	7425.9	0.0							
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	438.5	9%	Low	1370.8	70%	Moderate
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Van Sickle Lake	37251.5	4344.5	0.0	0%						
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Warm Creek	27773.8	8806.2	21.9	0%	7.6	35%	Moderate	16.7	24%	High
Washington Creek	21999.0	21789.9	377.5	2%	61.5	16%	Low	278.4	26%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	411.3	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1668.0	18%	Low	5899.7	35%	High
Wild Horse Creek	17140.2	9775.5	63.7	1%	0.7	1%	Low	34.1	47%	High
Wiley Ranch	45208.7		0.0							
Willow Creek DH	38896.9	4421.5	363.7	8%	103.0	28%	Low	284.0	22%	High
Willow Creek WM	23817.6	14809.7	4758.2	32%	446.8	9%	Low	1665.5	65%	Moderate

Table M-3. Goshawk Habitat Influence Index and Security Index Rank and Ratings by Watershed (HUC) for Alternative 3

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Above Weed Valley Reservoir	33815.8	7912.3	60.2	1%	3.9	7%	Low	26.1	57%	Moderate
Antelope Reservoir	21849.9	21510.7	0.0							
Armentrout Flat	20083.0	3627.3	115.6	3%	22.4	19%	Low	77.0	33%	High
Badger Basin	34607.9	0.2	0.1	64%	0.0	0%	Low	0.0	95%	Low
Baker And Thomas Reservoirs	25280.6	24969.8	0.0							
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	317.3	11%	Low	1161.3	60%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1002.5	12%	Low	3581.3	57%	Moderate
Big And Little Juniper Creeks	21384.9	1947.1	0.0	0%						
Big Sage Reservoir	25584.6	24600.3	0.0	0%						
Big Swamp	30138.3	2214.6	75.5	3%	0.0	0%	Low	0.8	99%	Low
Blacks Canyon	23132.0	14454.7	277.7	2%	53.7	19%	Low	176.4	36%	High
Boles Meadow	26436.8	25317.5	0.0	0%						
Butte Creek	24861.6	4262.5	52.8	1%	0.2	0%	Low	8.4	84%	Low
Canby-Pit River	38873.0	12359.7	767.8	6%	49.7	6%	Low	196.0	74%	Low
Clarks Valley	10505.3	1347.6	0.0	0%						
Clear Lake Inflow Northwest	57800.1	30184.4	0.0	0%						
Clear Lake Inflow South	28788.8	27795.1	4.1	0%	0.0	0%	Low	2.5	38%	High
Copic	17513.1	1109.8	0.0	0%						

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15%	Low	227.5	47%	High
Cottonwood Creek - North	25037.1	12896.4	8071.5	63%	1251.2	16%	Low	3774.1	53%	Moderate
Cottonwood Creek-South	16350.0	11917.6	3792.6	32%	648.7	17%	Low	2331.7	39%	High
Crooks Canyon	25109.4	3944.1	2109.9	53%	261.7	12%	Low	995.3	53%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1209.4	17%	Low	3990.0	43%	High
Delta Lake	19024.5	1130.9	198.7	18%	1.6	1%	Low	19.3	90%	Low
Dobe Swale	14554.1	7931.0	3.6	0%	1.6	44%	Moderate	3.6	0%	High
Double Head Mountain	35306.3	33297.2	0.0	0%						
Dry Creek	28886.1	2403.3	603.6	25%	64.5	11%	Low	270.5	55%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100%	Low
East Branch Lost River	17249.0	3712.1	0.0	0%						
East Creek	29458.5	29035.7	6007.4	21%	809.3	13%	Low	2756.4	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18%	Low	265.6	47%	High
East Tule Lake Valley	45783.3		0.0							
Egg Lake	20200.5	5024.6	23.1	0%	2.9	13%	Low	10.1	56%	Moderate
Fairchild Swamp	18700.9	18700.9	8.2	0%	0.5	7%	Low	3.2	61%	Moderate
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.0	17%	Low	3370.7	49%	High
Frog Waterhole	42760.7	37927.7	267.9	1%	52.1	19%	Low	158.2	41%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	401.9	15%	Low	1545.5	42%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15%	Low	683.6	44%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Ingall Swamp	19565.1	18496.6	0.0	0%						
Jim Creek	16455.2	1476.0	86.5	6%	41.7	48%	Moderate	72.3	16%	High
Jim Horn Ranch	11225.8	1953.4	0.0	0%						
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12%	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	405.1	17%	Low	1412.5	42%	High
Knobcone Butte	24308.1	23740.8	41.0	0%	4.5	11%	Low	19.2	53%	Moderate
Laird Landing	21728.6	9695.4	4.3	0%	0.0	0%	Low	0.0	100%	Low
Lake Annie	13828.9	2764.9	106.7	4%	5.1	5%	Low	29.5	72%	Low
Lassen Creek	15654.3	12749.1	5600.3	44%	848.7	15%	Low	3055.3	45%	High
Little Willow Creek	14137.6	14137.6	5.4	0%	0.0	0%	Low	1.9	65%	Moderate
Logan Slough	37400.2	37174.0	0.0	0%						
Lone Pine Butte	23296.6	23296.6	340.9	1%	79.5	23%	Low	230.4	32%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18%	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22%	Low	1591.9	33%	High
Lower Boles Creek	18618.9	18167.4	0.0	0%						
Lower Clover Swale Creek	21268.8	9988.9	0.0	0%						
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower Juniper Creek	12008.4	4783.8	167.5	4%	28.0	17%	Low	105.4	37%	High
Lower North Fork Pit River	14755.2	6714.9	0.0	0%						
Lower North Fork Willow Creek	25207.5	24565.4	28.1	0%	9.3	33%	Moderate	16.1	43%	High
Lower Rattlesnake Creek	16275.2	6124.1	0.0	0%						

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Lower Warm Springs Valley	17963.2	239.2	0.0	0%						
Lower West Shore Goose Lake	37205.9	27165.4	105.0	0%	4.5	4%	Low	15.2	85%	Low
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	502.5	11%	Low	1700.6	64%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	23977.2	8602.8	3138.2	36%	156.9	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	646.4	21%	Low	1969.5	37%	High
Middle Ash Creek	13389.5	1802.4	6.3	0%	0.0	0%	Low	0.0	100%	Low
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	43.8	15%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mosquito Creek-Bayley Tank	24712.7	16429.9	116.4	1%	13.5	12%	Low	53.2	54%	Moderate
Mowitz Creek	56660.1	49739.1	67.0	0%	13.9	21%	Low	52.5	22%	High
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.0	7%	Low	1835.9	75%	Low
North Of Horse Mountain	18038.2		0.0							
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	520.1	12%	Low	1761.8	60%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2454.7	19%	Low	8625.8	34%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	179.0	17%	Low	524.7	49%	High
Pine Creek	23614.0	53.2	19.2	36%	0.0	0%	Low	0.0	100%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Pine Creek South	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Pothole Valley	14309.8	13836.3	4.6	0%	1.4	30%	Moderate	4.6	0%	High
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Rimrock Lake	14873.4	14873.4	0.0	0%						
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High
Rock Creek	45912.5	25091.3	0.2	0%	0.0	0%	Low	0.0	100%	Low
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	482.4	19%	Low	1614.5	35%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Said Valley Reservoir	13108.8	3489.5	9.5	0%	0.0	0%	Low	3.9	59%	Moderate
Service Gulch	18142.2	2729.6	144.9	5%	22.6	16%	Low	83.6	42%	High
Sheep Camp	31128.3	25256.6	0.0	0%						
Sohonchin Spring	13229.0	12795.7	6164.5	48%	708.9	11%	Low	2389.9	61%	Moderate
South Big Swamp	16003.7	3110.1	115.5	4%	23.9	21%	Low	80.2	31%	High
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	225.7	22%	Low	643.4	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1703.4	18%	Low	5103.3	45%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle Alkali Lake	38038.8	18510.5	4415.2	24%	0.0	0%	Low	0.0	100%	Low
Spaulding Butte	30032.1	29123.0	4.7	0%	0.0	0%	Low	0.0	100%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Spooner Trough Canyon	15242.2	197.1	0.0	0%						
Steele Swamp	16340.4	13486.5	158.2	1%	20.6	13%	Low	92.2	42%	High
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	453.4	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	395.5	17%	Low	1322.4	43%	High
Upper Ash Valley	34892.9	7022.4	70.1	1%	8.9	13%	Low	35.3	50%	Moderate
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Fletcher Creek	11239.4	11205.6	4.1	0%	0.0	0%	Low	0.0	100%	Low
Upper Lost River	31724.4		0.0							
Upper Lost River Frontal	16716.6	14139.3	0.0							
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper Warm Springs Valley	26074.7	7425.9	0.0							
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	349.6	8%	Low	1291.9	72%	Low
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Van Sickle Lake	37251.5	4344.5	0.0	0%						
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Warm Creek	27773.8	8806.2	21.9	0%	7.6	35%	Moderate	16.7	24%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Washington Creek	21999.0	21789.9	377.5	2%	57.7	15%	Low	266.6	29%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	409.8	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1565.7	17%	Low	5658.6	38%	High
Wild Horse Creek	17140.2	9775.5	63.7	1%	0.7	1%	Low	34.1	47%	High
Wiley Ranch	45208.7		0.0							
Willow Creek DH	38896.9	4421.5	363.7	8%	90.5	25%	Low	279.3	23%	High
Willow Creek WM	23817.6	14809.7	4758.2	32%	420.9	9%	Low	1607.1	66%	Moderate

Table M-4. Goshawk Habitat Influence Index and Security Index Rank and Ratings by watershed (HUC) for Alternative 4

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Above Weed Valley Reservoir	33815.8	7912.3	60.2	1%	3.9	7%	Low	26.3	56%	Moderate
Antelope Reservoir	21849.9	21510.7	0.0							
Armentrout Flat	20083.0	3627.3	115.6	3%	22.4	19%	Low	77.0	33%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Badger Basin	34607.9	0.2	0.1	64%	0.0	0%	Low	0.0	95%	Low
Baker And Thomas Reservoirs	25280.6	24969.8	0.0							
Ballard Reservoir	12852.6	2270.5	1046.9	46%	74.1	7%	Low	223.8	79%	Low
Bare Creek	33440.5	7599.1	2883.6	38%	322.8	11%	Low	1177.8	59%	Moderate
Bidwell Creek	19501.8	14596.8	8284.8	57%	1065.0	13%	Low	3643.7	56%	Moderate
Big And Little Juniper Creeks	21384.9	1947.1	0.0	0%						
Big Sage Reservoir	25584.6	24600.3	0.0	0%						
Big Swamp	30138.3	2214.6	75.5	3%	0.0	0%	Low	0.8	99%	Low
Blacks Canyon	23132.0	14454.7	277.7	2%	53.7	19%	Low	176.7	36%	High
Boles Meadow	26436.8	25317.5	0.0	0%						
Butte Creek	24861.6	4262.5	52.8	1%	0.2	0%	Low	8.4	84%	Low
Canby-Pit River	38873.0	12359.7	767.8	6%	50.3	7%	Low	196.0	74%	Low
Clarks Valley	10505.3	1347.6	0.0	0%						
Clear Lake Inflow Northwest	57800.1	30184.4	0.0	0%						
Clear Lake Inflow South	28788.8	27795.1	4.1	0%	0.0	0%	Low	2.5	38%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Copic	17513.1	1109.8	0.0	0%						
Corral Creek	16487.0	5304.0	429.3	8%	65.9	15 %	Low	227.5	47%	High
Cottonwood Creek - South	16350.0	11917.6	3792.6	32%	815.8	22 %	Low	2331.7	39%	High
Cottonwood Creek- North	25037.1	12896.4	8071.5	63%	1413.7	18 %	Low	3802.0	53%	Moderate
Crooks Canyon	25109.4	3944.1	2109.9	53%	283.0	13 %	Low	1065.0	50%	Moderate
Davis Creek	21933.7	12159.8	7010.9	58%	1250.2	18 %	Low	4118.0	41%	High
Delta Lake	19024.5	1130.9	198.7	18%	1.6	1%	Low	19.3	90%	Low
Dobe Swale	14554.1	7931.0	3.6	0%	1.6	44 %	Moderate	3.6	0%	High
Double Head Mountain	35306.3	33297.2	0.0	0%						
Dry Creek	28886.1	2403.3	603.6	25%	66.7	11 %	Low	277.5	54%	Moderate
Eagle Creek	11360.2	5190.6	1518.2	29%	0.0	0%	Low	0.0	100 %	Low
East Branch Lost River	17249.0	3712.1	0.0	0%						
East Creek	29458.5	29035.7	6007.4	21%	830.1	14 %	Low	2791.8	54%	Moderate
East Fork Juniper Creek	24313.0	10371.6	496.5	5%	91.7	18 %	Low	265.6	47%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
East Tule Lake Valley	45783.3		0.0							
Egg Lake	20200.5	5024.6	23.1	0%	2.9	13 %	Low	10.1	56%	Moderate
Fairchild Swamp	18700.9	18700.9	8.2	0%	0.5	7%	Low	3.2	61%	Moderate
Fitzhugh Creek	24606.2	13146.2	6611.1	50%	1119.6	17 %	Low	3370.7	49%	High
Frog Waterhole	42760.7	37927.7	267.9	1%	52.2	19 %	Low	162.2	39%	High
Gleason Creek	10621.3	1501.5	235.9	16%	12.4	5%	Low	34.2	85%	Low
Headwaters North Fork Pit River	26218.3	9697.6	2684.5	28%	424.1	16 %	Low	1601.5	40%	High
Hulbert-Turner Creek	11128.9	10560.6	1230.6	12%	182.9	15 %	Low	683.6	44%	High
Ingall Swamp	19565.1	18496.6	0.0	0%						
Jim Creek	16455.2	1476.0	86.5	6%	41.7	48 %	Moderate	72.3	16%	High
Jim Horn Ranch	11225.8	1953.4	0.0	0%						
Joseph Creek	12321.5	8231.6	4303.8	52%	510.2	12 %	Low	1826.7	58%	Moderate
Kephart	56959.8	38508.8	2416.6	6%	411.8	17 %	Low	1417.4	41%	High
Knobcone Butte	24308.1	23740.8	41.0	0%	4.5	11 %	Low	19.2	53%	Moderate

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Laird Landing	21728.6	9695.4	4.3	0%	0.0	0%	Low	0.0	100 %	Low
Lake Annie	13828.9	2764.9	106.7	4%	5.1	5%	Low	29.5	72%	Low
Lassen Creek	15654.3	12749.1	5600.3	44%	942.1	17 %	Low	3293.0	41%	High
Little Willow Creek	14137.6	14137.6	5.4	0%	0.0	0%	Low	1.9	65%	Moderate
Logan Slough	37400.2	37174.0	0.0	0%						
Lone Pine Butte	23296.6	23296.6	340.9	1%	82.3	24 %	Low	249.7	27%	High
Lower Ash Valley	18595.9	18158.4	2823.1	16%	513.1	18 %	Low	1796.9	36%	High
Lower Big Valley	27523.3	7105.0	2371.4	33%	532.5	22 %	Low	1591.9	33%	High
Lower Boles Creek	18618.9	18167.4	0.0	0%						
Lower Clover Swale Creek	21268.8	9988.9	0.0	0%						
Lower Fletcher Creek	33027.2	31110.9	210.9	1%	19.4	9%	Low	88.9	58%	Moderate
Lower Juniper Creek	12008.4	4783.8	167.5	4%	28.0	17 %	Low	105.4	37%	High
Lower North Fork Pit River	14755.2	6714.9	0.0	0%						
Lower North Fork Willow Creek	25207.5	24565.4	28.1	0%	9.3	33 %	Moderate	21.3	24%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Lower Rattlesnake Creek	16275.2	6124.1	0.0	0%						
Lower Warm Springs Valley	17963.2	239.2	0.0	0%						
Lower West Shore Goose Lake	37205.9	27165.4	105.0	0%	4.6	4%	Low	19.8	81%	Low
Lower West Shore Upper Alkali Lake	18149.3	11465.7	4780.1	42%	523.5	11%	Low	1724.2	64%	Moderate
Lower Willow Creek	26748.9	11200.8	570.8	5%	68.6	12%	Low	261.3	54%	Moderate
Messenger Gulch East	11401.7	8602.8	3183.2	37%	157.1	5%	Low	630.2	80%	Low
Messenger Gulch West	12575.4	9673.1	3120.8	32%	676.3	22%	Low	1969.5	37%	High
Middle Ash Creek	13389.5	1802.4	6.3	0%	0.0	0%	Low	0.0	100%	Low
Middle Fletcher Creek	39222.2	26799.7	282.7	1%	44.0	16%	Low	182.1	36%	High
Mill Creek	22288.0	19190.5	9778.6	51%	448.2	5%	Low	1398.0	86%	Low
Moon Lake	46904.6	4084.5	831.7	20%	45.9	6%	Low	205.7	75%	Low
Mosquito Creek-Bayley Tank	24712.7	16429.9	116.4	1%	13.7	12%	Low	57.6	51%	Moderate
Mowitz Creek	56660.1	49739.1	67.0	0%	13.9	21%	Low	52.5	22%	High
Mud Lake	9119.1	5948.9	207.5	3%	42.1	20%	Low	126.1	39%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
North Fork Parker Creek	19166.8	18325.5	7386.1	40%	500.1	7%	Low	1836.3	75%	Low
North Of Horse Mountain	18038.2		0.0							
Northwest Shore Middle Alkali Lake	33370.8	15619.5	4351.5	28%	550.0	13%	Low	1844.2	58%	Moderate
Old Camp One	36091.5	21510.1	13042.8	61%	2575.5	20%	Low	8862.8	32%	High
Parker Creek	22262.2	6240.5	1822.8	29%	254.7	14%	Low	826.4	55%	Moderate
Parsnip Creek	38600.6	19596.6	1028.0	5%	183.1	18%	Low	533.8	48%	High
Pine Creek	23614.0	53.2	19.2	36%	0.0	0%	Low	0.0	100%	Low
Pine Creek south	19547.9	11943.3	6114.8	51%	392.1	6%	Low	1436.3	77%	Low
Pothole Valley	14309.8	13836.3	4.6	0%	1.4	30%	Moderate	4.6	0%	High
Red Rock Canyon	39828.8	2331.8	827.8	36%	98.6	12%	Low	345.3	58%	Moderate
Rimrock Lake	14873.4	14873.4	0.0	0%						
Roberts Reservoir-Pit River	35562.1	11483.6	1022.3	9%	245.1	24%	Low	622.9	39%	High
Rock Creek	45912.5	25091.3	0.2	0%	0.0	0%	Low	0.0	100%	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Rose Canyon	18125.5	13713.9	1392.9	10%	158.1	11%	Low	577.7	59%	Moderate
Ross Creek	12755.9	5190.5	2475.4	48%	537.8	22%	Low	1754.3	29%	High
Rush Creek	36405.2	25419.0	8729.5	34%	1749.9	20%	Low	5414.0	38%	High
Said Valley Reservoir	13108.8	3489.5	9.5	0%	0.0	0%	Low	3.9	59%	Moderate
Service Gulch	18142.2	2729.6	144.9	5%	22.6	16%	Low	83.6	42%	High
Sheep Camp	31128.3	25256.6	0.0	0%						
Sohonchin Spring	13229.0	12795.7	6164.5	48%	719.9	12%	Low	2417.6	61%	Moderate
South Big Swamp	16003.7	3110.1	115.5	4%	23.9	21%	Low	80.2	31%	High
South Fork Juniper Creek	14338.9	13707.0	1305.8	10%	261.1	20%	Low	891.2	32%	High
South Of Goose Lake	16687.9	1425.5	1026.3	72%	226.0	22%	Low	643.7	37%	High
South Tule Lake Sump	85568.0	38510.1	9230.9	24%	1885.9	20%	Low	5436.7	41%	High
Southern Jess Valley	12378.5	8179.2	609.1	7%	146.9	24%	Low	439.6	28%	High
Southwest Shore Middle	38038.8	18510.	4415.2	24%	0.0	0%	Low	0.0	100	Low

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Alkali Lake		5							%	
Spaulding Butte	30032.1	29123.0	4.7	0%	0.0	0%	Low	0.0	100%	Low
Spooner Trough Canyon	15242.2	197.1	0.0	0%						
Steele Swamp	16340.4	13486.5	158.2	1%	20.6	13%	Low	92.2	42%	High
Stone Coal Creek	29094.8	25094.9	3610.2	14%	646.6	18%	Low	2159.4	40%	High
Stones Canyon	27725.9	16320.8	797.4	5%	158.9	20%	Low	454.9	43%	High
Thoms Creek	16587.7	8005.4	2799.6	35%	163.2	6%	Low	657.2	77%	Low
Tionesta	77495.1	66514.8	2304.1	3%	402.7	17%	Low	1329.9	42%	High
Upper Ash Valley	34892.9	7022.4	70.1	1%	8.9	13%	Low	35.3	50%	Moderate
Upper Canyon Creek	23229.2	2926.8	1198.7	41%	135.0	11%	Low	550.5	54%	Moderate
Upper Deep Creek	16321.8	1393.7	552.0	40%	74.3	13%	Low	211.0	62%	Moderate
Upper Fletcher Creek	11239.4	11205.6	4.1	0%	0.0	0%	Low	0.0	100%	Low
Upper Lost River	31724.4		0.0							
Upper Lost River Frontal	16716.6	14139.3	0.0							

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
Upper Turner Creek	15941.5	14868.8	251.0	2%	48.4	19%	Low	157.2	37%	High
Upper Twelvemile Creek	27790.4	5453.2	670.1	12%	10.6	2%	Low	73.8	89%	Low
Upper Warm Springs Valley	26074.7	7425.9	0.0							
Upper West Shore Upper Alkali Lake	28856.1	12213.2	4623.9	38%	434.2	9%	Low	1362.1	71%	Low
Upper Willow Creek	23120.3	14981.8	428.6	3%	73.3	17%	Low	228.7	47%	High
Van Sickle Lake	37251.5	4344.5	0.0	0%						
Wagontire Creek	26475.3	11980.5	268.9	2%	63.8	24%	Low	186.6	31%	High
Warm Creek	27773.8	8806.2	21.9	0%	7.6	35%	Moderate	16.7	24%	High
Washington Creek	21999.0	21789.9	377.5	2%	59.3	16%	Low	272.4	28%	High
West Shore Lower Alkali Lake	16687.3	7113.4	2969.5	42%	19.6	1%	Low	94.2	97%	Low
West Shore Middle Alkali Lake	15403.2	6672.0	1658.7	25%	125.5	8%	Low	409.8	75%	Low
Whitehorse Flat Reservoir	51922.9	26529.9	9073.7	34%	1664.9	18%	Low	5899.7	35%	High
Wild Horse Creek	17140.2	9775.5	63.7	1%	0.7	1%	Low	34.1	47%	High
Wiley Ranch	45208.7		0.0							
Willow Creek DH	38896.9	4421.5	363.7	8%	103.0	28	Low	284.0	22%	High

Watershed (HUC) Name	Sum of all acres in all ownerships	National Forest System Acres	Acres of Goshawk habitat on National Forest	% of National Forest within HUC in Habitat	Ac of NF habitat within 50m road buffer	Road buffer as % of habitat in HUC (NFS lands)	Habitat Influence Index Rank	Acres of Goshawk habitat (NF) w/in 200m buffer	Security Index (NFS lands only)	Security Index Rank
						%				
Willow Creek WM	23817.6	14809.7	4758.2	32%	437.0	9%	Low	1638.5	66%	Moderate

Appendix K: Tribal Relations

Native American Intergovernmental Affairs: Modoc National Forest, Tribal Relations Program

Native American Intergovernmental Affairs Origins

The United States and the 562 federally recognized tribes share a unique relationship whose foundation lies in the earliest history of this country. [7] The settlement of the New World began with Native American tribes possessing a clear strategic advantage over the 13 colonies, both militarily and economically; consequently, early American treaties with Indian tribes emphasized both tribal sovereignty and property rights. [8] Also, treaties were intended to deter foreign powers from forging alliances with Native Americans on U.S. promises of protection and trade. [9] Good relations with Indian tribes were paramount to American foreign policy since tribes protected U.S. western and southern borders from European aggressors. [10] The practice of treaty making continued as the country reconstituted itself under the United States Constitution in 1787. [11] Over 371 treaties were negotiated with Native American tribes by special commissioners acting on behalf of the President and under oversight by the War Department until 1849; subsequently, oversight was transferred to the newly established Department of the Interior. [12] The U.S. Senate continued to ratify Indian treaties between 1787 and 1871, which "under the Authority of the United States shall be the supreme Law of the Land." [13] Treaties are superior to state constitutions and state laws. [14] The U.S. House of Representatives protested their exclusion over the Indian treaty-making process by passing the Indian Appropriations Act of 1871. The action prevented Congress from entering into any treaties with Indian tribes (25 U.S.C. § 71). [15]

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7 Federal Register, Department of the Interior, Bureau of Indian Affairs, Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs (Washington, D.C.: U.S. Government Printing Office, Volume 73, No. 66, 2008), 18553.

8 Charles Wilkinson, Indian Tribes as Sovereign Governments, 2nd ed. (Oakland: American Indian Lawyer Training Program, 2004), 93.

9 Ibid, 93-96; Johnson v. M'Intosh, 21 U.S. 543, 5 L.Ed. 681, 8 Wheat. 543 (1823).

10 Wilkinson, Indian Tribes as Sovereign Governments, 93-94.

11 Yale Law School, "The Avalon Project-Documents in Law, History and Diplomacy," under "Report of Proceedings in Congress; February 21, 1787," http://avalon.law.yale.edu/18th_century/const04.asp (accessed October 14, 2008).

12 The National Archives, "Records of the Committee on Indian Affairs, 1820-1946," under "Chapter 12. Records of the Committee on Interior and Insular Affairs and Predecessor Committees, 1816-1968," http://www.archives.gov/legislative/guide/senate/chapter-12-indian-affairs.html#1-41 (accessed October 14, 2008).

13 U.S. Constitution, in article 2, section 2, President "shall have the power, by and with the advice and consent of the Senate to make Treaties, provided two thirds of the Senators present concur," and article 6.

14 Worcester v. State of Georgia, 31 U.S. 515 (1832).

15 Wilkinson, Indian Tribes as Sovereign Governments, 97.

The Source of Federal Trust Responsibilities

As non-Indian populations dramatically increased coupled with industrial revolutionary technological advances and the War of 1812, Indian tribes suffered a shift in the balance of power that favored the United States; consequently, Congress increased their use of treaties as instruments for massive land concessions from American Indians. [16] Land concessions obligated the nation to tribes when aboriginal territories were exchanged for U.S. promises set forth in treaties. [17] The obligation is known as, "the doctrine of trust responsibility," was first articulated in a U.S. Supreme Court opinion of Chief Justice John Marshall. [18] The Honorable John Marshall created two distinctions. Firstly, Chief Justice Marshall limited the sovereign status of Indian tribes by designating all tribes as "domestic dependent nation." [19] Lastly, federal trust responsibility is drawn from the reference, "Their (Indian tribes) relation to the United States resembles that of a ward to his guardian." [20] The Honorable Frank Murphy, Justice on the U.S. Supreme Court, further distinguished trust responsibility in his opinion to the Court in 1941:

> In carrying out its treaty obligation with the Indian tribes the Government is something more than a mere contracting party. Under a humane and self imposed policy which has found expression in many acts of Congress and numerous decisions of this Court, it has charged itself with moral obligations of the highest responsibility and trust. Its conduct, as disclosed in the acts of those who represent it in dealings with Indians, should therefore be judged by the most exacting fiduciary standards. [21]

Again, fiduciary responsibilities are based upon treaties, which are, "not a grant of rights to the Indians, but a grant of right from them, – a reservation of those not granted." [22]

Forest Service Trust Responsibilities

The USDA Forest Service, Southwest Pacific Region (Region 5), Modoc National Forest, is an agency of the federal government, whose obligation toward Native American tribes is governed by trust responsibility and where, "any Federal government action is subject to the United States' fiduciary responsibilities toward the Indian tribes." [23] The scope of these trust responsibilities are defined by the Constitution, Congress, courts, the executive branch, and statutes to protect and maintain the lands, resources and traditional use areas of Indians. [24] Presently, the Modoc National Forest consists of 1,979,407 acres of which 1,654,392 acres are administered by the Modoc National Forest, which includes portions of the aboriginal homelands for seven federally recognized tribes, which are as follows:

Alturas Indian Rancheria, California; and

Cedarville Rancheria, California; and

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[16] Wilkinson, Indian Tribes as Sovereign Governments, 93-96.

[17] Ibid, 53.

[18] Cherokee Nation v. The State of Georgia, 30 U.S. 1 (1831).

[19] Mary Christina Wood, "Origins and Development of the Trust Responsibility: Paternalism or Protection?" [paper presented at the Federal Bar Association-28th Annual Indian Law Conference, Albuquerque, NM, April 10, 2003]

[20] Cherokee Nation v. The State of Georgia, 30 U.S. 1 (1831)..

[21] Seminole Nation v. United States, 316 U.S. 286, 296-97 (1941).

[22] United States v. Winans, 198 U.S. 371, 25 S.Ct. 662, 49 L.Ed. 1089 (1905).

[23] Covelo Indian Community v. FERC, 895 F.2d 581 (9th Cir. 1990); Nance v. EPA, 645 F.2d 701, 711 (9th Cir. 1981).

[24] U.S. v. Mitchell, 463 U.S. 206 (1983); U.S. Department of Agriculture. 2008. Prepared by the Office of the General Council. Departmental Regulation: *Policies on American Indians and Alaska Natives [March 14, 2008]* No. 1340-007.

Fort Bidwell Indian Community of the Fort Bidwell Reservation of California; and

Klamath Tribes, Oregon (formerly the Klamath Indian Tribe of Oregon); and

Modoc Tribe of Oklahoma; and

Pit River Tribe, California (includes XL Ranch, Big Bend, Likely, Lookout, Montgomery Creek and Roaring Creek Rancherias); and

Susanville Indian Rancheria, California. [25]

Also, the Modoc National Forest includes the indigenous territories of two federally unrecognized tribes, which are as follows:

The Shasta Tribe, Inc.; and

The Shasta Nation, Inc. (Confederated Bands of the Shasta and Upper Klamath River Indians). [26]

Brief on Selected Tribes of the Modoc National Forest

Modoc Tribe of Oklahoma

The Modoc Tribe of Oklahoma were followers of *Keintpoos* 'having the water-brash' who is commonly known as Captain Jack. [27] The Modoc Tribe of Oklahoma once belonged to the amalgamation of tribes that signed the 1864 Treaty of Klamath Lake, Oregon with the Klamath, Modoc, and Yahooskin Band of Snake Indians. [28] The refusal of Captain Jack to remain on the Klamath reservation led to the Modoc War of 1872-73, which ended in the execution of *Keintpoos* on October 2, 1873, and the relocation of 153 Modoc men, women, and children to the Quapaw Agency in Oklahoma. [29] The Eastern Shawnee purchased 4,000 acres of trust land for the Modoc in 1874; however, Modoc populations dwindled to 99 natives by 1879 and only 68 Modoc were eligible to receive allotments following the passage of the General Allotment Act of 1887. [30] The U.S. Congress authorized the remaining Modoc survivors to return to the Klamath Tribes, Oregon, on March 3, 1909, but many remained or returned to Oklahoma. [31] Upheavals in national Indian policy prevailed following the Hoover Commission, Indian Reorganization Act of 1934, and World War II with federal trust responsibility being utilized as an instrument against tribes. The enactment of Public Law 83-280 on August 15, 1953, facilitated the termination of

[25] Federal Register, Department of the Interior, Bureau of Indian Affairs, Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs (Washington, D.C.: U.S. Government Printing Office, Volume 73, No. 66, 2008), 18553; Modoc National Forest, "About Us: Forest Facts," http://www.fs.fed.us/r5/modoc/about/index.shtml [accessed October 29, 2008].

[26] Dan Meza, "Tribal Contact Information of the Modoc National Forest," Modoc National Forest [March 30, 2008].

[27] Keith A. Murray, *The Modocs and Their War* [Norman: University of Oklahoma Press, 1959], 35. "The leader of the Modoc group who adjusted best to the new ways in Yreka was *Keintpoos*, dubbed, for a joke, by Judge Steele as 'Captain Jack' because of an alleged resemblance to one of the miners of that community."; Access Genealogy-Indian Tribal Records, "Modoc Indian Chiefs and Leaders," http://www.accessgenealogy.com/native/tribes/modoc/modocindianchiefs.htm [accessed October 29, 2008].

[28] "Treaty with the Klamath, etc., 1864," October 14, 1864, 16 Stats., 707., Ratified, July 2, 1866, Proclaimed February 17, 1870, *Indian Affairs: Laws and Treaties. Vol. II (Treaties)*. Compiled and edited by Charles J. Kappler. Washington: Government Printing Office, 1904, http://www.fws.gov/Pacific/ea/ tribal/treaties/Klamath_1864.pdf [accessed October 29, 2008].

[29] Murray, *The Modocs and Their War*, 304, 318.

[30] Patricia Shruggs Trolinger, "The History of the Modoc Tribe of Oklahoma," Modoctribe.net. http://www.modoctribe.net/history.html [accessed October 29, 2008].

[31] Chapter 253, Mar. 3, 1909. [H. R. 16743.] | [Public, No. 306.] 35 Stat., 751. Section 5; Trolinger.

both the Klamath and Modoc Tribes. [32] Again, Federal Indian policy revolved when President Richard Milhous Nixon repudiated the former Indian policy of termination with his address to Congress on July 8, 1970. [33] President Nixon introduced a new Indian policy of Self-Determination, which continues to be followed today. The Modoc Tribe of Oklahoma acted on this new policy and was recognized as a tribe on May 15, 1978. [34] The Modoc tribe remains the only federally recognized entity with traditional cultural properties on the national forest that is without the jurisdictional concerns of Public Law 83-280.

Pit River Tribe, California (Includes XL Ranch, Big Bend, Likely, Lookout, Montgomery Creek and Roaring Creek Rancherias)

The Modoc National Forest encompasses portions of the Pit River Tribe, which is one of five California tribes and one Oregon tribe of the national forest whose tribal jurisdictions are subject to Public Law (P.L.) 83-280. [35] The passage of P.L. 83-280 authorized state criminal jurisdiction over Indians and non-Indians in the mandatory states of California, Minnesota, Nebraska, Oregon and Wisconsin with Alaska as the 6th state; moreover, P.L. 83-280 transferred criminal jurisdiction to those mandatory states without tribal consent between 1953 and 1968. [36] Non-mandatory states or optional states could enact P.L. 83-280 by legislative action; however, the law was amended in 1968 to where tribes must provide consent. [37]

> The switch to state jurisdiction also meant a decline in potential tribal control over law enforcement because tribes under Public Law 280 could not take advantage of the 1975 Indian Self-Determination Act to contract with the BIA [Bureau of Indian Affairs] for the administration of their own law enforcement services. [38]

The Pit River Tribe, California, and 106 tribes of California have not requested the state to retrocede their jurisdiction back to the United States; furthermore, all California tribes are subject to P.L. 83-280. [39] Public Law 83-280 uses federal trust responsibility as an instrument to assimilate tribes, which adds to issues of tribal, federal and state jurisdiction within the Modoc National Forest. The late President Richard M. Nixon redirected American Indian policy to Self-Determination, which Congress enacted as Public Law (P.L.) 93-638, the Indian Self-Determination and Education Assistance Act of 1975. [40] P.L. 93-638 provides federal government-to-government authorities for agencies to contract with tribes; however, those authorities are limited by statute to the Department of the Interior and Department of Health and Human Services.

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[32] Pubic Law **83-280**, August 15, 1953, codified as 18 U.S.C. § 1162, 28 U.S.C. § 1360, and 25 U.S.C. § 1321–1326; 25 U.S.C. 564.

[33] Environmental Protection Agency. Presidential Documents, "President Nixon, Special Message on Indian Affairs," [July 8, 1970] http://www.epa.gov/tribalportal/pdf/president-nixon70.pdf [accessed on October 29, 2008].

[34] 25 U.S.C. 861a; U.S. Government Accountability Office, Report: "Indian Issues: BLM's Program for Issuing Individual Indian Allotments on Public Lands Is No Longer Viable," GAO-07-23R BLM Indian Allotments, [October 20, 2006] 16.

[35] Wilkinson, Indian Tribes as Sovereign Governments, 126; Public Law (P.L.) 83-280, August 15, 1953, codified as 18 U.S.C. § 1162, 28 U.S.C. § 1360, and 25 U.S.C. § 1321-1326.

[36] Garole Goldberg, J.D., Duane champagne, Ph.D., "Final Report: Law Enforcement and Criminal Jurisdiction Under Public Law 280," [November 1, 2007], vi, 3.

[37] Ibid., vi.

[38] Ibid., 6.

[39] Garole Goldberg, J.D., Duane champagne, Ph.D., "Final Report: Law Enforcement and Criminal Jurisdiction Under Public Law 280," [November 1, 2007], 9.

[40] P.L. 93-638, Approved January 4, 1975 (88 Stat. 2203).

The Pit River Tribe, California, was federally recognized by the Secretary of the Interior through an Act of Congress on August 13, 1946. [41] The tribe is a confederation of eleven bands as follows, under a constitution adopted in 1964:

1. Ajumawi	*5. Atwamsini*	*9. Kosealekte*
2. Astariwi	*6. Hammawi*	*10. Madesi*
3. Aporige	*7. Illmawi*	*11. Hewisedawi* [42]
4. Atsugewi	*8. Itsatawi*	

The traditional cultural properties of the tribe are described as the 100-mile square by the Pit River Tribe, which were based upon natural boundaries of mountains and watersheds; however, exact boundaries that was offered as evidence to the Indian Claims Commission was not specific, according to the commission. [43] Nevertheless, tribal trust land and fee patent land of the Pit River Tribe, California, lies within or abuts the boundaries of the Modoc National Forest; therefore and pursuant to Executive Order 13175, the national forest maintains a government-to-government consultation agreement with the tribe to assist the agency's execution of its' federal trust responsibility. [44] The Modoc National Forest explained its travel management alternatives to the Pit River Tribal Council during a scheduled consultation on Wednesday, 3 September 2008. [45] Irvin Brown, Tribal Councilman-Kosealekte Alternate, stated during the meeting that the plan was acceptable provided that road closures did not impede tribal members from accessing sacred sites or traditional cultural properties. [46]

Klamath Tribes, Oregon

The Klamath Tribes, Oregon, is subject to state jurisdiction under Public Law 83-280, where, "state or county law enforcement replaced the Bureau of Indian Affairs police, and state criminal trials largely replaced those carried out by the federal government." [47]

Federal Statutes Relevant to American Indian Tribes

Table O-1. Federal Laws Relevant to Native American Concerns on National Forest Management

Law	Purpose
National Environmental Policy Act of 1969	Requires consideration of effects on cultural values and diversity.
American Indian Religious Freedom Act of 1978, as amended in 1994	Protects Indian religious practices and access to sacred sites.

[41] Indian Claims Commission, No. 347, The Pit River Indians of California, Petitioners v. The United States of America, Defendant, Smithsonian Institution [August 11, 1951], 1.

[42] Pit River Tribe, Tribal Contact List, [January 22, 2008]; Native American Rights Fund, "National Indian Law Library," [1964] http://doc.narf.org/nill/Constitutions/pitconst/pitriverconst.htm. [accessed October 29, 2008].

[43] Indian Claims Commission, No. 347, [August 11, 1951], 21-22.

[44] Memorandum of Understanding Regarding a Communication and Consultation Protocol between USDA Forest Service, Modoc National Forest, Lassen Shasta-Trinity National Forest, and Lassen National Forest and the Pit River Tribe [May 4, 2007].

[45] Modoc National Forest, Tribal Relations Program, "Government-to-Government Consultation Standard Form" [Wednesday, 3 September 2008].

[46] Ibid.

[47] Garole Goldberg, J.D., Duane champagne, Ph.D., "Final Report: Law Enforcement and Criminal Jurisdiction Under Public Law 280," [November 1, 2007], 3,9.

Law	Purpose
Federal Land Policy and Management Act of 1976	Coordinates with Indian tribes to inventory, plan, and manage resources of value to tribes.
National Historic Preservation Act of 1976	Accounts for impacts of management on prehistoric and historic sites.
Archeological Resources Protection Act of 1979, as amended in 1992	Protects archeological resources and requires that affected tribes be notified if archeological studies might harm or destroy culturally or spiritually important sites.
Native American Graves Protection and Repatriation Act of 1990	Requires consultation with tribes about disposition of Native American remains, funerary objects, and other cultural relics.

Appendix L: Non-Significant Amendments to the Modoc NF Land and Resource Management Plan (LRMP)

LRMP General Changes

Current Language	Replacement Language
"Keep over 87 percent of the Forest open to OHVs." (p. 4-11)	"Prohibit motor vehicle travel off designated roads and trails."

Changes by Resource

Current Language	**Replacement Language**
Recreation: "Provide off-highway vehicle (OHV) recreation where OHV activities will not cause resource damage nor conflict with other uses. Reference the OHV map for use areas." p. 4-19	"Provide off-highway vehicle (OHV) recreation where OHV activities will not cause resource damage nor conflict with other uses. Reference the MVUM for routes available for mixed use." p. 4-19
"OHV use is generally open, but may be subject to restriction identified on the OHV map." p. 4-36	"OHV use is subject to restrictions identified on the MVUM." p. 4-36
Visual Retention Management Prescription: "Off-highway vehicle use is permitted, but with restrictions." p. 4-77	"Off-highway vehicle use is permitted only on routes designated as open to mixed use (see MVUM)." p. 4-77
Visual Retention Management Prescription: "Random entry from main roads is discouraged by maintenance of ditches, natural barriers, vegetation, signing, etc. Use is subject to restrictions identified on the OHV map."	"Random entry from main roads is discouraged by maintenance of ditches, natural barriers, vegetation, signing, etc. Use is subject to restrictions identified on the MVUM."
Visual Retention Management Prescription: "Areas with this prescription are open to OHV use if impacts cannot be seen from the primary roads."	"Areas with this prescription are open to OHV use only on routes designated for mixed use."
Raptor Management Prescription: "Off-highway vehicle use has seasonal restrictions." p. 4-85	Raptor Management Prescription: "Motor vehicle use has seasonal restrictions." p. 4-85
Minimum Level Management Prescription: "Off-highway vehicle use is permitted." p. 4-35	"Off-highway vehicle use is permitted on roads specified for mixed use only."
Recreation: "Refer to OHV map for seasonal closure areas." p. 4-88	Recreation: "Refer to MVUM for seasonally closed roads and trails." p. 4-88
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-96	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-96
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-104	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-104
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-110	"Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-110
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-114	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-114
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-119	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-119

Current Language	Replacement Language
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-128	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-128
Recreation: "Permit OHV use subject to restrictions identified on the OHV map." p. 4-132	Recreation: "OHV use subject to restrictions identified on the MVUM" p. 4-132
Rangeland Management Prescription: "Off-highway vehicle use is permitted." p. 4-93	Rangeland Management Prescription: "Off-highway vehicle use is only permitted when indicated specifically in the permitee's AOP." p. 4-93
Rangeland Management with Forage Improvements (Range-Forage) Management Prescription : "Off-highway vehicle use is permitted." p. 4-99	Rangeland Management Prescription: "Off-highway vehicle use is only permitted when indicated specifically in the permitee's AOP." p. 4-99
Even-aged Timber Management Prescription: "Off-highway vehicle use is permitted." p. 4-109	"Off-highway vehicle use is restricted to designated roads indicated on the MVUM."
Timber Management with Partial Retention Management Prescription: "Off-highway vehicle use is permitted." p. 4-113	"Off-highway vehicle use is restricted to designated roads indicated on the MVUM."
Timber Management with Forage Production Management Prescription: "Off-highway vehicle use is permitted." p. 4-117	"Off-highway vehicle use is restricted to designated roads indicated on the MVUM."
Uneven-aged Timber Management Prescription: "Off-highway vehicle use is permitted." p. 4-127	"Off-highway vehicle use is restricted to designated roads indicated on the MVUM."
Timber Management on Low Productivity Lands Management Prescription: "Off-highway vehicle use is permitted." p. 4-131	"Off-highway vehicle use is restricted to designated roads indicated on the MVUM."

Changes by Management Area

Current Language	Replacement Language
31 – Highgrade - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-150	31 – Highgrade - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-150
3 - Fandango - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-154	3 - Fandango - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-154
33 - Lake City – "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-158	33 - Lake City – "Limit OHV use to authorized NFTS roads.. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-158
34 - Fitzhugh – "Soils: On sensitive watersheds	34 - Fitzhugh – "Soils: Limit OHV use to

Current Language	Replacement Language
and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-154	authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-154
36 - Patterson - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-170	36 - Patterson - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-170
42 - Stone Coal - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-178	42 - Stone Coal - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-178
43 - Portuguese Ridge - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-181	43 - Portuguese Ridge - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-181
44 - North Adin - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-185	44 - North Adin - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-185
61 - Medicine Lake - "Soils: On sensitive watersheds and other sensitive areas, limit OHV to established roads and trails, as needed. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-212	61 - Medicine Lake - "Soils: Limit OHV use to authorized NFTS roads. Rehabilitate areas causing watershed degradation. Restrict use or obliterate roads and trails, when necessary, to protect the soil resource and maintain water quality." p. 4-212

Tionesta-Area Roads

Current Language	Replacement Language
b. (S) "New roads will not be constructed in winter roosts. Existing roads in winter roosts will be closed during the wintering period."	This decision amends the Modoc NF LRMP to exclude Tionesta-area system roads 44A19D, 44A19C, 44N19, 44N20, and 44N04Y from the winter road-closure requirement for bald eagle winter roost habitat.

Appendix M: Response to Public Comments

Introduction

The public comment period on the Motorized Travel Management Draft Environmental Impact Statement for the Modoc National Forest began on May 12, 2008 and closed on June 10, 2008. Agencies, officials, and members of the public were invited to comment on the DEIS. Public open houses were provided throughout May, and the public was invited to provide the Forest with written comments on the Draft Environmental Impact Statement.

The Forest received 49 comment letters, including two form letters—one with 8,010 signatures, and one with 488 signatures. Fourteen letters came from organizations, 35 from individuals.

The Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508) state,

> Comments on an environmental impact statement or on a proposed action shall be as specific as possible and may address either the adequacy of the statement or the merits of the alternatives discussed or both." (40 CFR 1503.3) Comments and responses in this section are based on those types of specific comments, "which proposed to (1) modify alternatives including the proposed action, (2) develop and evaluate alternatives not previously given serious consideration, (3) supplement, improve, or modify its analysis, and (4) make factual corrections (40 CFR 1503.4).

Comments were grouped by type of substantive comments described above, and were forwarded to the interdisciplinary team for review. The Interdisciplinary Team prepared statements which address the concerns expressed. The following sections contain those statements and the responses to them.

The bracketed numbers following the comment indicate who made the comment. They correspond to the list on the last page ("Commenters on the Draft Environmental Impact Statement").

Adding Routes

Public comment 1: Some respondents thought that we should not add any more routes—the Forest Service cannot maintain the existing National Forest Transportation System (Same as issue 4 p.10 of the FEIS). [44, 45, 23, 14, 1, 32].

> ***Response:*** Alternatives 2, 4, and 5 add a range of 286 to 336 miles of unauthorized routes to the National Forest Transportation System. Alternatives 1 and 3 do not add any unauthorized routes to the National Forest Transportation System. The Forest maintains Maintenance Level (ML) 3, 4, 5 routes with our existing budget, and we have sufficient funds to maintain ML 2 routes that need attention; however, the need is very small each year. Refer to the Transportation, Affordability section in chapter 3 of the FEIS.

Public comment 2: Some respondents stated that 336 miles is too many roads added to the National Forest Transportation System [2, 44, 43, 45].

> ***Response*:** The Modoc National Forest is currently open to cross-country travel on 87 percent of the land. After this decision is implemented, cross-country travel will be prohibited, and access to many popular recreation activities will be reduced. The Forest Service completed an inventory of unauthorized routes in 2007, and 491 miles of unauthorized routes were identified. Many of these routes provide important motorized access and recreation opportunities. In order to maintain opportunities for the public to use and recreate on the Modoc National Forest, a range of 286 to 336 miles of routes were analyzed in the FEIS for potential addition to the National Forest Transportation System. Although these additions may seem to be great, when compared to the loss of use of 87

percent of the Forest, it is quite small. In addition, in considering these potential additions to the National Forest Transportation System, the Forest Service considered factors such as safety, law enforcement, costs, user conflicts, public opinion and desires, resource impacts, and motorized and non-motorized opportunities. The FEIS addressed all of these factors. Chapter 3 of the FEIS analyzes impacts of the additions to each resource, including recreation.

Public comment 3: One respondent thought that all unauthorized routes should be added to the National Forest Transportation System and those roads with erosion problems should be added as ML 1 roads until the problem can be repaired [21].

***Response*:** All unauthorized routes were evaluated against many different possible environmental consequences, not just erosion, to determine if they should be added to the National Forest Transportation System. If it was determined that the route would cause environmental consequences to other resources that could not be mitigated, that route was not proposed for addition. The amount of harm caused by its inclusion in the National Forest Transportation System would outweigh the benefit of the addition. All of the unauthorized routes that would be added to the National Forest Transportation System will be brought in as ML 2 roads.

Public comment 4: One respondent suggested that a table should show each route proposed for addition and evidence that supports the inclusion into the National Forest Transportation System. Show methodology for choosing routes [33 - #5].

***Response*:** Volume 2, appendix A of the FEIS contains a table that shows why each route is being proposed for addition into the National Forest Transportation System. The Interdisciplinary Team evaluated each inventoried unauthorized route against a series of GIS backdrops, including fens, vernal pools, noxious weeds, Threatened and Endangered plants, critical aquatic refuge, lost river short nose sucker, shortnose sucker, Threatened and Endangered fish, Modoc National Forest Threatened and Sensitive fish, hydrological area of concern, soil areas of concern, primitive recreation opportunity spectrum class, recreation sites, resource and natural areas, recreation opportunity spectrum class semi-primitive non-motorized, special interest areas, riparian streamside, Riparian Conservation Area, riparian reserve, tribal areas of concern, tribal kosale area of concern, bald eagle, bald eagle winter roost, California spotted owl, golden eagle, goshawk, leks, prairie falcon, sandhill crane, Swainson's hawk, northern spotted owl, caves, roadless area, and user comment. The user comment layer was created in response to comments we received regarding specific, particular unauthorized routes and their use by the public.

Each of the inventoried unauthorized routes was displayed against the backdrop of all of these layers. If the route was found to be in conflict with a resource and the resource specialist found the impact to be unacceptable and immitigable, the route was eliminated from further consideration. The remaining routes were proposed for potential addition. The reason for proposing addition of the route is explained in the first table in Appendix A, Route Analysis.

Public comment 5: Several respondents requested that a short spur route should be added at Reservoir F for use by fly fisherman [20, 46, 47, 48].

***Response*:** The Responsible Official agrees on adding this route to the National Forest Transportation System, along with seasonal closures. However, because additional analysis is necessary to determine potential effects, addition of this route would be addressed outside of the travel management process.

Air Quality

Public comment 1: Some respondents felt that the DEIS fails to adequately address issues of air quality. Consequently, we must use quantification and modeling to understand whether the MDF's plans will comply with Federal and State air quality standards and to know what impact they may have on human health, wildlife, vegetation, water bodies, and climate [33].

***Response*:** See FEIS, Chapter 3, Affected Environment Overview, Information on Other Resources, Air Quality. The number of vehicle miles traveled annually by Forest users is not expected to change in any alternative through prohibition of cross-country travel and the redirection of motorized use onto designated routes. Therefore, no change is anticipated that will adversely affect air quality.

Alternatives

Public comment 1: Some respondents thought that Alternative 3 should include seasonal closures on all native surface roads in winter [15, 11, 1, 32].

***Response*:** Thank you for your comment. Alternative 3 does not include seasonal closures. It was partially developed as a baseline for comparing impacts of the other action alternatives.

Public comment 2: Many respondents thought that an Alternative that considers road closures on the existing national forest road system must be included in the range of alternatives [33, 43, 31, 32].

***Response*:** The Purpose and Need for action is identified in chapter 1 of the FEIS. The Proposed Action deals specifically with Subpart B of the Travel Management Rule. It provides direction for a system of National Forest Transportation System roads, trails, and areas designated for motor vehicle use, and the prohibition of motor vehicle use off designated roads and trails and outside designated areas. Subpart B is intended to prevent resource damage caused by unmanaged motor vehicle travel by the public. Therefore, any analysis of our existing system and comprehensive changes made to that system are beyond the scope of this analysis. We did, however, close one road because of known resource vandalism – knowledge of the vandalism was known prior to analysis and we used this process as the vehicle to provide the necessary protection.

The Forest Service Handbook 7709.55, section 10.2 provides further direction on travel planning for the designation of roads, trails and areas for motor vehicle use. Under objective number 1, it states that reconsideration of the entire Forest transportation system is not required or appropriate (Forest Service Manual 7715.1).

Adequacy of Analysis

Public comment 1: Many respondents stated that the Forest must do a science-based travel analysis [33, 44, 45, 32].

***Response*:** The resource specialists' analyses in the FEIS are based on the best available science known to the Forest staff at the time of document preparation. We also note that Forest Service Manual 7712 (1) states the following: "...travel analysis is not required to inform decisions related to the designation of roads and trails for those administrative units and ranger districts that have issued a Proposed Action as of January 8, 2009." Nothing in the travel management regulations at 36 CFR 212 requires that travel analysis must be completed before roads and trails on National Forest System lands are designated for motor vehicle use in accordance with Subpart B of the Travel Management Rule (36 CFR 212.50).

Public comment 2a: Some respondents requested that the Forest Service incorporate previous decisions into the analysis of the impacts of those routes (existing system) [33].

Public comment 2b: The Forest Service should perform a comprehensive inventory of its past transportation decisions as part of travel analysis [33].

***Response*:** The Forest Service believes that reviewing and inventorying all roads, trails, and areas without regard to prior travel management decisions would be unproductive, inefficient, and counter to the purposes of the Subpart B of the Travel Management Rule. In its response to comments on these regulations, the Department of Agriculture explained that "[n]othing in this final rule requires reconsideration of any previous administrative decisions that allow, restrict, or prohibit motor vehicle

use on NFS roads and NFS trails or in areas on NFS lands and that were made under other authorities, including decisions made in land management plans and travel plans." 70 Fed. Reg. 68264, 68268 (Nov. 9, 2005). To clarify that travel management decisions implementing Subpart B need not review and inventory all past transportation decisions, the Forest Service added paragraph (b) to 36 CFR 212.50, which provides that these prior decisions may be incorporated in the designation of roads, trails, and areas pursuant to Subpart B. Similarly, the Forest Service Manual 7715.03 – Policy (1) states that the Forest must use previous decisions to establish a **starting point** for proposals to change travel management decisions. Please see the "Baseline" section in this document for additional information.

Public comment 3: One group suggests that no decisions should be made until the Forest completes a comprehensive inventory of all roads, trails, temporary roads and user created routes [33].

Response: The existing NFTS routes are in the INFRA database. The Forest conducted an extensive effort to inventory the existing unauthorized routes on the Forest. Public meetings and open houses were held to inform the public about the inventory and to receive comments on the inventory. The inventory was posted on the Forest's website, and many comments were received from the public. Missing routes identified by the public were visited and were added to the inventory where appropriate. Some unauthorized routes were no longer used by wheeled motor vehicles, and so were not included in the inventory.

Aquatics

Public comment 1: The DEIS did not analyze impacts to Goose Lake and Warner Lake (sic) redband trout [32, 43, 33].

***Response*:** The analysis of effects of the Proposed Action on the Goose Lake redband trout and the Warner Valley redband trout were completed in the Biological Evaluation for aquatic species (available in the project record). For the Goose Lake redband trout it was determined that there would be a "may affect individuals, but is not likely to result in a trend toward Federal listing or loss of viability" determination. On a Forest-wide scale, in-channel sediment delivery, habitat alteration, and collection were not expected to be a significant impact due to the limited amount of motor vehicle use in the areas of concern. With the prohibition of cross-country travel and no identified unauthorized routes within or adjacent to its habitat, the Warner Valley redband trout does not have suitable habitat that is directly, indirectly, or cumulatively affected by the Proposed Action. There is a "no impact" determination for the Warner Valley redband trout.

Public comment 2: There was no analysis of this redband trout done in the DEIS. Seasonal closures on the existing system roads should be enacted in the spawning area of the Warner Lake (sic) redband trout [32, 43, 33].

***Response*:** The analysis of effects of the Proposed Action on the Warner Valley redband trout was completed in the Biological Evaluation for aquatic species. Seasonal closures on existing system roads to protect spring spawning habitat for the Warner Valley redband trout would have limited effectiveness as these spawning areas are generally not accessible by vehicle traffic during spawning season for this species.

Public comment 3: The DEIS does not mention listed Threatened and Endangered species (Modoc sucker, shortnose sucker, Lost River sucker, Shasta crayfish, and the proposed Oregon spotted frog) [33].

***Response*:** The analysis of effects of the Proposed Action on Threatened and Endangered species is contained in the aquatic Biological Assessment (BA) for aquatic species, which is part of the project record and is incorporated by reference in the FEIS. This BA was written in accordance with the requirements set forth in section 7 of the Endangered Species Act (19 USC 1536(c)), and follows standards established in Forest Service Manual direction (FSM 2672.42). The Oregon spotted frog

was analyzed in the Biological Evualation on page 5. Analysis of candidate species is not a requirement of the ESA.

Public comment 4: The DEIS does not disclose how the OHV designation decisions will minimize impacts to riparian areas [33].

***Response*:** Direct and indirect effects to habitat can be found in the Biological Evaluation and Biological Assessment for aquatic species (available in the project record). During the Interdisciplinary Team analysis process, each route was looked at for potential impacts to riparian areas. If there was a known impact or conflict with the riparian resource, the route was excluded from addition to the NFTS.

Public comment 5: There should be strict seasonal closures on roads in spring spawning area of redband trout. [43]

***Response*:** The Biological Evaluation determined that all action alternatives would eliminate cross-country travel and reduce overall authorized use at varying levels from the current baseline. This reduction would result in no significant impacts (direct, indirect, or cumulative) from road use during spring spawning to these species from the current baseline. Furthermore, the roads in the spring spawning area self-regulate and are essentially impassable during the spawning season. Weather conditions make the road impassable to all vehicles most years. In the years where passage does occur, vehicle use would be limited to system roads and is so low that impacts are considered insignificant.

Bald Eagle (LRMP Amendment)

Public comment 1: Some respondents asked that the winter bald eagle roost closure remain in place [31, 3, 2, 23, 16, 15].

Response

Biological History

Bald eagle winter roosting at Timber Mountain has been known to the Modoc National Forest since at least 1988. Records indicate that local residents were aware of winter roosting occurring on the north edge of Timber Mountain as early as 1984. Roosting appears to have occurred at two locations. One location was near the border of the Forest with private land in sections 22 and 15. This is near what was the Watt Ranch in the late 1980s. For purposes of clarity this site will be referred to as the "Ranch roost" in this response. The second site is uphill and south of the private land straddling the section line between sections 21 and 28 near a game guzzler. This site will be referred to as the Guzzler roost. Both roost sites were used during the period of 1988 through 1992 during the winters. In June 1992, the Timber Mountain fire burned with stand-replacing intensity through the Ranch roost while the Guzzler roost was under burned, but fire did not kill the roost trees. Eagle roosting was observed in the Ranch roost in the fall of 1992 with some indication in the spring of 1993 that further roosting had occurred. Spring surveys of the Guzzler roost in 1993 also indicate that some roosting may have occurred during the winter of 1993. No formal surveys have been made since 1993 of roost areas. Anecdotal information and incidental observations indicate a probable decline in bald eagle use of the Timber Mountain and Highway 139 corridor.

Change in use pattern

There may have been a change in the use of the local area by bald eagles. Prior to 1993, observations of bald eagles eating road killed deer along Highway 139 are relatively common in the Forest incidental observation database. After 1993 they are infrequent. The working theory of local biologists is that road-killed deer declined so significantly that road-killed carcasses were generally unavailable to feed large groups of eagles. The severe deer herd kill that occurred during the winter of

1992-1993 reduced the deer herd significantly. California Department of Fish and Game data indicate a drop in the number of deer from 90,000 in 1992 to 30,000 for 1993 in the northeastern California deer assessment unit (Loft et al. 1998 Report to the Fish and Game Commission). There is no current evidence of a rebound in numbers of deer.

Current condition of the roosts

There is little evidence that that the Ranch roost is still viable or used. Most of the area has no trees or snags suitable for perching due to the fire and salvage activities. The Guzzler roost may be used occasionally when weather conditions and deer herd movements result in regular deer road kill along Highway 139.

Management History

The Ranch roost and Guzzler roost were considered at the time of Forest Land and Resource Management Plan finalization in 1990. However, after plan signature in 1991, signing of closures and Forest orders did not occur before the Timber Mt. fire occurred in 1992. With subsequent changes in eagle use in the Timber Mountain area, a seasonal closure was never implemented. It does not appear that there is a viable winter roost at the Ranch roost site at this time. The Guzzler site appears to provide structurally suitable conditions for roosting but may have provided only a sporadic food source after the 1992-1993 winter deer die-off. The Guzzler site is also inaccessible most winters due to snow drifting on the roads that access the area. These roads do not provide access to the electronics site on the top of Timber Mountain and therefore generally remain untracked and inaccessible.

Conclusion

Given the low suitability of the Ranch roost site, and the low accessibility of the Guzzler site, there does not appear to be a need to implement a road closure buffer for these two roosts. A seasonal road closure would not appear to provide any additional protection for bald eagles in this location. Therefore, the Forest proposes making a non-significant amendment to the Land and Resource Management Plan to reflect conditions on the ground and to clarify public access in the vicinity of the community of Tionesta.

Baseline

Public comment 1: Some respondents suggest that the Forest Service has not provided adequate or reliable documentation for what they consider to be the "baseline" of the current transportation system. The Forest has not provided decision notices, records of decision, NEPA documentation, road management objectives, or funding allocation data for putative system routes in its jurisdiction [33].

***Response*:** The National Forest Transportation System was reviewed prior to the start of this project, and was established as the baseline. A combination of the INFRA database and the Forest's GIS system serve as the transportation atlas for the Forest. This atlas was created by reviewing historic transportation maps which were checked by experienced personnel for accuracy. Once the existing system was determined, the data was then uploaded into the INFRA database. The INFRA database is periodically updated as things change across the transportation system.

Public comment 2: One respondent felt that the No-Action Alternative should not be used as a baseline to compare against the other alternatives. [33]

***Response*:** Thank you for your comment. The Forest Service is required by law to follow the Council on Environmental Quality Regulation, Sec. 1502.14 (d) which directs us to include the alternative of no action. The Region feels that this is an appropriate baseline for this project since it compares how the landscape would be affected if current management continues against the other alternatives which enact the Travel Management Rule by prohibiting cross country travel.

Big-Game Retrieval

Public comment: One respondent requested that reasonable allowance should be made for big game retrieval with ATVs . There was a suggestion to employ a permit system which allows hunters to retrieve their game from off road with an ATV or other motorized vehicle [8].

Public comment 1: Several respondents request that the MDF should seasonally allow cross-country travel with ATVs for the specific purpose of big-game retrieval [34, 3, 8].

> ***Response*:** Thank you for your comment. Forest Service Manual 7715.74 (3) states that " To promote consistency, the Regional Forester should coordinate designations pursuant to Forest Service Manual 7715.74, paragraph 1, within states and among adjoining administrative units." The Regional Forester of Region 5. which includes the Modoc National Forest decided to not generally provide for retrieval of big game by ATVs across country.

Public comment 2: One respondent suggested that the Forest Service work with the county Fish, Game, and Recreation Commission to develop a process for downed game retrieval [40].

> ***Response*:** Thank you for your comment. See response immediately above.

Botany

Public comment 1: One commenter suggests that mitigations such as barriers or re-routing of roads would be effective in eliminating OHV effects on the two Sensitive species plants [34].

> ***Response*:** The FEIS, Botanical Resources, Addendum to Effects Analysis, states that Alternatives 2 and 5 may have effects on three Sensitive plant species: *Buxbaumia viridis*, *Calochortus longebarbatus* var. *longebarbatus*, and *Eriogonum umbellatum* var. *glaberrimum*. There are three occurrences of *Buxbaumia viridis*, four occurrences of *Calochortus longebarbatus* var. *longebarbatus*, and one occurrence of *Eriogonum umbellatum* var. *glaberrimum* located within 100 feet of proposed route additions under Alternatives 2 and 5 (eight total Sensitive plant occurrences). The Responsible Official has decided not to add routes located within 100 feet of these sensitive plants to eliminate any potential for harm. The routes that impact these species will not be included as part of the National Forest Transportation System or shown on the Motor Vehicle Use Map.
>
> In response to the barrier question, it is unlikely that erecting barriers or re-routing roads would eliminate effects on these three Sensitive plant species. These are typically spur roads which often pass through or adjacent to the occurrence, and through potential habitat. An effective barrier would essentially negate the value of the spur in several instances, or simply close the spur. Re-routing of roads could cause further disturbance in potential habitat and negate possible benefits of re-routing for Sensitive species.

Public comment 2: One group suggests that the Forest should conduct field surveys of Sensitive and Watch List plant species on proposed routes with a high likelihood of their presence [41].

> ***Response*:** Field surveys were performed on vernal pools located within 300 feet of proposed routes which had potential habitat for the two Federally listed plant species, *Orcuttia tenuis* and *Tuctoria greenei*. Survey results are available in the project record. All routes with a potential to affect any occurrence of either of these species were removed from all of the action alternatives.
>
> Analysis of the effects of proposed routes on Sensitive plant species was conducted with the best available information. Please see Appendices A-2 and F for additional information.

Public comment 3: The Modoc National Forest has very little current, accurate field data as to how much public rangeland and Forest is infected with noxious weeds, and what the effect of the action will have on the situation [43].

***Response*:** An inventory of weed locations on the Forest exists, and is updated as new occurrences are discovered. Surveys for new occurrences of noxious weeds are conducted annually concurrently with sensitive plant surveys, even though no systematic surveys have been conducted exclusively for noxious weeds since 2004. The FEIS effects analysis for noxious weeds was conducted using the best available information on noxious weed infestations across the Forest. The potential effects of the action alternatives on noxious weeds are analyzed in the FEIS, Noxious Weeds, Affected Environment and Environmental Consequences; and in the Noxious Weed Risk Assessment, Modoc National Forest Motorized Travel Management Project. The Record of Decision for Noxious Weed Treatment was approved on August 12, 2008.

Public comment 4: Additional information is necessary to evaluate the continued use of roads and trails near fens, wet meadows, riparian habitat and vernal pools.

***Response*:** The focus of the current action is to implement the prohibition on cross-country travel contained in the Travel Management Rule, and to address important motorized recreation access and opportunities affected by the prohibition. The Forest is not, at this time, evaluating whether use on existing system roads and trails should continue (see response to comment Adequacy of Analysis 2b above). The effects of proposed routes and mixed use near fens, wet meadows, riparian habitat, and vernal pools were analyzed in the FEIS, Chapter 3-Botanical Resources, Affected Environment and Environmental Consequences. Effects associated with the National Forest Transportation System are considered in the cumulative effects section of Chapter 3, Botanical Resources, pp. __.

Public comment 5: There have been no systematic noxious-weed surveys on the Forest since 2004 and no route-specific surveys done for travel management (p. 178). Very little current field data is available on how much land is affected; therefore, the Forest Service also does not know what the situation is on hundreds of miles of proposed unauthorized routes [33].

***Response*:** A basic inventory of weed locations on the Forest exists, and is updated as new occurrences are discovered. Surveys for new occurrences of noxious weeds are conducted annually concurrently with sensitive plant surveys, even though no systematic surveys have been conducted exclusively for noxious weeds since 2004. The FEIS effects analysis for noxious weeds was conducted using the best available information on noxious weed infestations across the Forest.

Public comment 6: The DEIS reveals the failure of the Forest to comply with its Land and Resource Management Plan (LRMP) standards and guidelines, which direct the Forest to control noxious weeds and perform annual monitoring of noxious weed population levels [33].

***Response*:** The noxious weed specialist report did not clearly describe LRMP monitoring requirements for noxious weeds, and this has been corrected in the FEIS. See Chapter 3, Noxious Weeds, Analysis Framework: Statute, Regulation, Forest Plan, and Other Direction.

The Land and Resource Management Plan requires that noxious weed monitoring results be reported annually, but monitoring itself is an ongoing process, expected to have only moderate precision and moderate reliability (see the Modoc National Forest Land and Resource Management Plan, p. 5-8, "Forest Pests.").

Surveys for new occurrences of noxious weeds have been conducted every year since 2004 concurrently with sensitive plant surveys, although these were not "systematic" in the sense that they were dedicated weed-mapping surveys. New weed-occurrence reports are completed whenever new occurrences are found, and these new occurrences have been added to the Forest's noxious weed database annually, both prior to and after 2004. Surveys were not systematically looking for weeds, which typically occur in disturbed areas such as roadsides, along trails, in landings, around recreation areas, etc. Botany surveys generally focus on potential habitat for Threatened, Endangered, Sensitive, and Watch list Plant species, which typically occur on sites which have not been greatly altered, while noxious weeds are more common on sites that have been disturbed. During botany surveys, new

noxious weed locations are mapped, however, there has been no systematic inventory specifically for noxious weeds across the Forest.

Public comment 7: The assumption in the DEIS that change of vehicle class on National Forest Transportation System roads has no impact to rare plants or their associated habitats (p. 128) is not correct and contradicts (p. 185) other statement in same document [43].

***Response*:** We agree that some statements regarding the effects of change in vehicle class were confusing in the DEIS and have made corrections in the FEIS. Within the section, we addressed the potential indirect effect on TES plants from increased noxious weed risk in the Environmental Consequences section.

Public comment 8: For each route proposed to be added, the FEIS should provide the specific rationale that supports the decision that the benefits of continued motorized routes outweigh the negative effects. Analysis should be for routes within 100 feet of sensitive habitats [41].

***Response*:** Botany analysis included sensitive habitats within 100 feet of proposed routes. Site-specific rationale for adding proposed routes to the National Forest Transportation System are documented in appendix A, vol. 2, Modoc National Forest Motorized Travel Management FEIS.

Public comment 9: The Proposed Action allows motorized travel to continue within or adjacent to sensitive habitats (fens, wet meadows, riparian habitat and vernal pools) (p. 141-154). Include the rationale for each specific road or trail within 100 feet. of sensitive habitats, and modify or reduce proximity to and adverse effects on these resources [41].

***Response*:** Potential effects of proposed route additions, seasonal closures, changes to vehicle class, and changes to the existing road system are analyzed in the FEIS for each of the alternatives in the Botany, Environmental Consequences section. Also in the Biological Assessment for *Orcuttia tenuis* and *Tuctoria tenuis*, p. 9-15; and in the Biological Evaluation for Sensitive Plants, p. 5-17.

Climate Change

Public comment 1a: One group suggests that the DEIS violates NEPA by failing to analyze the impacts of climate change [33].

Public comment 1b: One group asks that the FEIS include a discussion of climate change and its potential effects on the Forest as it relates to the route designation decision and the National Forest Transportation System [41]

Response: This action is focused on managing where motor vehicles travel. This action does not regulate or increase the number of vehicles on NFS lands. The regulation of emissions is not within the jurisdiction of this agency. The Forest Service acknowledges that climate change has the potential to affect resources on the Forest. These effects are discussed in Chapter 3 in the Soils and Hydrology section, where there is a section on climate change.

Close System Roads

Public comment 1a: Several responders suggest that the Forest should close system routes around Lava Beds National Monument and the South Warner Wilderness, to prevent trespass [37, 15, 1].

Public comment 1b: Several responders suggest that the Forest close 46N17 and spurs east of Lava Beds National Monument and 46A21MB and MA to maintain the roadless characteristics of the area [15].

***Response*:** The purpose and need for the current action is to implement Subpart B of the travel management regulations and address unmanaged motorized cross-country travel, not to close existing National Forest Transportation System roads and trails. However, the educational and law-enforcement efforts that will be associated with implementation of this decision may help with

motorized trespass issues in general. In addition, the need for this action may either be addressed outside of this process and closed administratively, or be carried forth into the revision of the Land Management Plan.

Cross-Country Travel

Public comment 1: Some respondents feel that cross-country travel should be allowed on the Forest [6, 22].

***Response*:** Across the nation, unmanaged motor vehicle use, particularly OHV use, has resulted in unplanned roads and trails, erosion, watershed and habitat degradation, and impacts to cultural resource sites. Compaction and erosion are the primary effects of motor vehicle use on soils. Riparian areas and aquatic-dependent species are particularly vulnerable to damage from motor vehicle use. Unmanaged recreation, including impacts from OHVs, is one of "Four Key Threats Facing the Nation's Forests and Grasslands" (USDA Forest Service, June 2004).

On November 9, 2005, the Forest Service published final travel management regulations in the Federal Register (FR Vol. 70, No. 216-Nov. 9, 2005, pp 68264-68291). This final Travel Management Rule requires designation of those roads, trails, and areas that are open to motor vehicle use on national Forests. Only roads that are part of a National Forest Transportation System (NFTS) may be designated for motorized use. Designations are made by class of vehicle and, if appropriate, by time of year. The final rule prohibits the use of motor vehicles off designated NFTS roads and NFTS trails, as well as use of motor vehicles on roads and trails that are not specifically designated for public use.

No National Forest is exempt from this rule.

Cultural Resources

Public comment 1: One responder stated that the Forest Service has misconstrued its obligations to apply the minimization criteria at a site-specific level during the route-designation process, and the agency proposes to designate roads through 234 archeological sites resulting in negative effect to the heritage resources on those sites [33].

***Response*:** We are following the Motorized Recreation Programmatic Agreement (2006) with the State Historic Preservation Office, which allows the Forest to implement the following strategy found on page 96 of the FEIS, Volume 1:

> National Register of Historic Places evaluation, however, can be deferred for historic properties where (1) no physical damage or reasonable potential for physical damage exists, (2) effects are ambiguous and monitoring is prescribed, or (3) Standard Resource Protection Measures (cf., OHV Programmatic Agreement (PA)) can be prescribed to ensure that the values or potential values of the historic property can be protected. If effects are ambiguous (i.e., origin, age, severity, etc.), then limited-term monitoring (see Monitoring) may be employed to more fully characterize the nature of any effects, the need for evaluation, or whether additional management measures might be implemented in lieu of NRHP evaluation or other procedures under 36 CFR 800. NRHP evaluation is required at sites where physical damage from past vehicle use is noted, and forests cannot or will not protect properties from new or ongoing effects using prescribed protection or treatment measures listed in this strategy, the OHV PA, or other measures identified in consultation with the SHPO.

We have evaluated effects to heritage resources associated with each proposed route addition. We determined that the observed effects of the existing user-created routes on most heritage resource sites are minor or negligible, as identified in appendix F.

A sample of the 242 archaeological sites designated for monitoring should be examined each year. It is recommended that a 10 percent sample be selected—or 24 sites per year for three years. If no noticeable effects are identified on any of these sampled sites, then the need to continue monitoring should be reexamined.

Directives

Public comment 1a: Some respondents suggest that the proposed action is insufficient in the Sierra Nevada Forest Plan Amendment and Northwest Forest Plan directives. Watershed analysis must be completed to determine influence of each road on Aquatic Conservation Strategy objectives.

Public comment 1b: The exemption in the final directives is contrary to the Travel Management regulations at 36 CFR 212.

> ***Response:*** This comment addresses issuance of national travel management directives and is outside the scope of the current action.

Dispersed Camping

Public comment 1: Some respondents stated that dispersed camping should be addressed in this action. [39,36]

> ***Response*:** The Responsible Official decided to designate short spur roads in lieu of setting aside specific dispersed camping areas in this action. Based on public input, the Forest learned that the use on the Modoc National Forest is Forest-wide, and that the public prefers to have a range of choices on where they camp rather than be limited to a specific area.

Public comment 2: Some respondents did not want the Forest to limit parking to one vehicle length; instead, to designate the spurs for use as access to dispersed camping or parking [39, 36].

> ***Response*:** See comment Dispersed Camping 1 above. Once the Travel Management Rule is implemented and the Motor Vehicle Use Map is issued, motorized travel will no longer occur across country. Once the Motor Vehicle Use Map is published, motor vehicles must stay on the designated roads, within one vehicle length, or within 30 feet of the road.

Public comment 2: Some respondents want dispersed camping (separate from historic use) to be permitted within 100 feet of a designated road. (Forest Service Manual 7715.74 and 7716.13), and to monitor impacts of use. [34].

> ***Response*:** Thank you for your comment. It states in Forest Service Manual 7715.74 (1) that "the Responsible Official may include in a designation the limited use of motor vehicles within a specified distance of certain forest roads…solely for the purpose of dispersed camping or retrieval of a downed big game...." It further states that the authority in paragraph 1 should be used sparingly… and that rather, the official should designate spur roads for this purpose. The Responsible Official will provide for dispersed camping along or at the end of designated routes. Nowhere in the handbook does it designate or recommend a specific length off a road for use by dispersed camping.

Public comment 3: One respondent had concerns that dispersed camping would be closed (Upper and Lower Dan Ryan) [19].

> ***Response*:** If the roads that access dispersed camping at Upper and Lower Dan Ryan are added to the National Forest Transportation System, they would not be in compliance with the riparian guidelines for the Forest and therefore would not meet the Purpose and Need for this project. An individual can park on a designated road and walk into the site if he or she wants to camp. The two routes that access the sites in question will not be added to the National Forest Transportation System because both of

these roads would require design and substantial reconstruction in order to safely access the main road.

Do not Close Forest

Public comment 1: Some respondents understood the action as closing the Forest to public use [24, 22].

***Response*:** This action will not close the Forest to public use; however, it will restrict the use of motor vehicles by the public to designated roads and trails.

Enforcement

Public comment 1: One respondent requested information on where funding comes from for enforcement. [39]

***Response*:** As stated in appendix G, volume II of the FEIS, page 165:

> The national Law Enforcement and Investigation (LEI) budget is funded by appropriated funds from Congress to provide law enforcement services on the National Forest System lands. The Travel Management program is one of many Forest programs to benefit from federal law enforcement funding. For the past few years, law enforcement funding has increased, and that has translated into an increase in field law enforcement personnel.

To enhance enforcement of the Travel Management Rule, Region 5 Forest recreation programs have applied for and received grant dollars (green-sticker funding) from the State of California Off-Highway Motor Vehicle Recreation Division Grants Program. These state funds are earmarked specifically for enforcement of off-highway vehicle laws and regulations on the various forests, and are performed primarily by forest protection officers (FPOs). In addition, law enforcement officers (LEOs) support the FPOs as needed, especially if serious violations have occurred. In recent years, state law enforcement grants have ranged from three to four million dollars annually, with similar funding anticipated for the 2008-2009 grant cycle.

Further information on law enforcement and how it relates to travel management can be found in appendix G of the FEIS.

Executive Orders

Public comment 1: Executive Orders 11644 and 11989 should guide the Travel Management process. The route designation process should be directed by current Forest Service policy, as well as certain regulatory mandates, and the best peer-reviewed and objective ecological data available. Executive Orders 11644 (1972) and 11989 (1977): Require the agency to ensure the use of off-road vehicles on public land will be controlled [32, 33].

***Response*:** The Forest Service promulgated the Travel Management Rule to implement these executive orders, which both address "Use of Off-Road Vehicles on the Public Lands" (E.O. 11644, as amended by E.O.11989). The current action implements direction contained in the Travel Management Rule regarding management of motor vehicle use on the National Forests, and in particular, the management of OHV use and cross-country travel.

Implementation and Education

Public comment 1: One group states that no action should be taken to decommission routes if they are not added to the National Forest Transportation System [40].

***Response*:** Decisions to decommission routes are made on a case-by-case basis. If they are not added to the NFTS, they are evaluated as part of the Forest in general, and treated appropriately.

Public comment 2: One respondent requested that the FEIS address implementation of the Travel Management Rule [39].

***Response*:** An implementation strategy can be found in appendix G, volume I,. p. 167-168 of the FEIS in the Law Enforcement section. Pages 167-169 speak directly to implementation.

Public comment 3: Some respondents suggested share-the-road information, maps, speed limits, and road signs would greatly enhance visitor safety on all ML 3 roads designated for mixed use [34, 40].

***Response*:** Education will be an ongoing effort across the Forest, especially in the early stages of implementation of the Travel Management Rule. Signage of National Forest Transportation System routes that will show on the Motor Vehicle Use Map should be completed within the first three years of the project. The implementation strategy in volume II of the FEIS in Appendix G, Law Enforcement, p. 167-168, describes the types of educational activities we foresee.

Public comment 4: Respondents indicated that education of public would be important prior to implementation [34, 40].

***Response*:** Education will be an ongoing effort across the Forest, especially in the early stages of implementation of the Travel Management Rule. The implementation strategy in volume II of the FEIS in Appendix G, Law Enforcement, p. 167-168, describes the types of educational activities we foresee.

Public comment 5: Some respondents stated that additional information would be necessary to fully describe monitoring and enforcement commitments, the affected environment, and proposed increase in mixed use [41].

***Response*:** In Volume 2 of the FEIS there are two appendices that relate to this concern: Appendix C, Monitoring Plan; and Appendix G, Law Enforcement. Both of these appendices contain information about monitoring and enforcement commitments. The affected environment and the proposed increase in mixed use is addressed throughout volume 1, chapter 3 of the FEIS.

INFRA Database

Public comment 1: One group states that the Forest Service is unable to provide convincing evidence that all routes in the INFRA database were designed to be open for long-term, public motorized recreation [33].

***Response*:** Updating the INFRA database is an ongoing effort; however, considerable time was taken to insure that roads designated for long-term, continuous use were correctly input into the INFRA database when the transportation atlas was being created. That said, through the travel management process additional coding errors were found, and will be corrected prior to the publication of the Motor Vehicle Use Map (MVUM). Furthermore, once the MVUM is produced, it will be updated annually and any additional corrections will be made at that time.

Public comment 2: Respondents noted that routes in the INFRA database that are ML 1 are showing on the DEIS maps [33].

***Response*:** Thank you for helping us to find that discrepancy. An error occurred in the production of maps for the DEIS. ML 1 routes will not be shown on the maps for the FEIS because ML 1 roads are closed to motorized vehicle use.

Inventoried Roadless Areas (IRAs)

Public comment 1a: Some respondents indicate that to allow OHV use in Inventoried Roadless Areas would cause disproportionate conflict between the quiet recreationist community and OHV users, and

would risk precluding roadless areas from further consideration for wilderness designation [2, 33] (same as Issue 6 in FEIS).

Public comment 1b: Some respondents suggest that the Forest Service is proposing to add routes in Roadless areas.

***Response*:** There are no unauthorized routes proposed for addition in agency dedicated Inventoried Roadless Areas. The Citizen Proposed Wilderness Areas already contain roads. See discussion and analysis in the Inventoried Roadless Areas, and the Roadless Characteristics section of chapter 3.

Public comment 2: Several respondents asked that the Forest Service remove all roads (National Forest Transportation System and unauthorized routes from agency roadless areas).

***Response*:** The purpose and need for the current action is to address unmanaged cross-country travel and to implement Subpart B of the travel management regulations, not to close and decommission existing National Forest Transportation System roads. See responses to comments addressing Subpart A below.

Public comment 3: Routes 46N21M and 46A21M are currently used by an OHV group for their Mt. Dome run. They are in a roadless area. Other routes are available for use and these should be closed.

***Response*:** The purpose and need for the current action is to address unmanaged cross-country travel and to implement Subpart B of the travel management regulations, not to close and decommission existing National Forest Transportation System roads. See responses to comments, Subpart A .

Maintenance

Public comment 1: Use volunteers to control vegetation encroachment on mixed use roads. Describe the current OHV program and the potential to assist with the Forest's future road maintenance through programs such as adopt-a-trail or adopt-a-road [34].

***Response*:** There are only a few recreation user groups in the area; therefore, it is difficult to recruit volunteers to do this kind of work. We have had some limited success with specific projects such as installing signs on the California Backcountry Trail, and developing trailheads at Pepperdine and East Creeks. We will continue to use volunteers and partners as opportunities arise.

Public comment 2a: The Forest cannot maintain its existing National Forest Transportation System, yet is proposing to add routes. As roads degrade from lack of maintenance, this is a liability for the Forest [42, 40, 33].

Public comment 2b: How can the Forest Service address known road-related resource impairments, given the lack of maintenance funds and the addition of new routes to the system?

***Response*:** The majority of the road maintenance costs on the Forest is for ML 3, 4, and 5 roads. Maintenance level (ML) 2 roads do not significantly add to our costs. All of the roads proposed for addition to the National Forest Transportation System are ML 2 roads, so the additional cost is minimal. See the FEIS, Chapter 3, Transportation Facilities, Affordability.

Public comment 3: If the Forest Service adds routes, they should be able to maintain them. Non-maintained routes may lead to erosion, may collapse, and may cause serious safety problems [42, 13, 40, 33].

***Response*:** The routes proposed for addition to the National Forest Transportation System are all ML 2 roads. Maintenance on ML 2 roads is focused on correcting safety hazards, preventing resource damage, and on route identification signs. As safety or resource problems are identified, they will be prioritized for inclusion in our road maintenance program along with the maintenance needs of the other roads.

Public comment 4: One respondent asked the Forest Service to upgrade National Forest Transportation System Forest Route 10 to a good-quality, unpaved road with proper foundation and surfacing aggregate materials (gravel)[37].

***Response*:** This comment is outside the scope of the project. However, the Forest received funding to improve Primary Route 10 under the American Recovery and Reinvestment Act (ARRA) of 2009. Work is currently planned to start next spring or summer on the repairs to this road.

Public comment 5: One respondent suggests that there should be a sign put at Ash Creek that says "No vehicles past this point."

***Response*:** Without additional information about where on Ash Creek this sign should go, the Forest cannot respond to this request.

Maps

Public comment 1: Some respondents requested that citizen wilderness areas should be shown on maps [31, 15].

***Response*:** The creation of maps is an expensive and time-consuming activity. The maps that have been created to show the alternatives display a large amount of information. There could be endless amounts of additional information displayed on those maps. We feel that additions to those maps, such as Citizen Inventoried Areas, would allow for a loss of clarity. However, a smaller version of the map is located in the Roadless section of chapter 3. Furthermore, the GIS layer of citizen inventoried roadless areas is available on the Forest and if a specific need is identified for those maps, the public may request them on an as-needed basis.

Public comment 2: One respondent asked how the Motor Vehicle Use Map will be funded each year, and how quality control would ensure routes aren't lost off maps from year to year. Maps should be good for more than a year [39].

***Response*:** The Motor Vehicle Use Map will be funded through our normal budget process. Official files of the Motor Vehicle Use Map will be retained at the Forest headquarters, and can be revised as needed.

Minimum Road System

Public Comment 1: The Forest Service (FS) should identify the minimum road system needed for safe and efficient travel and for protection of FS lands. Close and decommission National Forest Transportation System routes that are duplicative [44, 41, 31, 15].

Response: The travel management regulations comprise three parts: Subpart A, Administration of the Forest Transportation System; Subpart B, Designation of Roads, Trails, and Areas for Motor Vehicle Use; and Subpart C, Use by Over-Snow Vehicles. Subpart A of the travel management regulations includes the provision referred to in this comment. The focus of this action is implementation of Subpart B, which directs the Forest Service to designate a system of roads, trails, and areas for motor vehicle use. Subpart B also provides that prior decisions regarding the existing National Forest Transportation System may be incorporated into the designated system. For purposes of the current proposal, the Forest has identified a need to end unrestricted cross-country travel to protect Forest resources, while at the same time maintaining motorized access and recreational opportunities for the public. A broad-scale effort to close and decommission roads does not meet the purpose and need for action at this time. Implementation of Subpart B will have immediate, on-the-ground effects, which are the subject of the analysis contained in this FEIS.

Mixed Use

Public comment 1: One group states that the DEIS does not adequately analyze mixed use and its effects of OHV use and adding routes [33].

***Response*:** Information on the impacts of mixed use is available in the FEIS, Chapter 3, Transportation; and in appendix N.

Public comment 2: One respondent felt that OHV travel on unpaved county and National Forest System roads is legal [34].

***Response*:** The Forest Service does not have jurisdiction over county roads. OHV use on unpaved National Forest System roads may be authorized by the Responsible Official, the Forest Supervisor.

Public comment 3: Green-sticker vehicle access on ML 3 roads is essential for a complete recreational experience with loop opportunities [36].

***Response*:** 36 CFR 212.55, Criteria for Designation of Roads, Trails, and Areas, states the following:

> The Responsible Official shall consider effects on National Forest System natural and cultural resources, public safety, *provision of recreational opportunities*, access needs, conflicts among uses of National Forest System lands, the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration [italics added].

Based on public comments, there is an interest in designating ML 3 roads for use by OHVs so that loop routes are connected for recreational opportunities. The mixed-use analysis in the project record provides details on mixed use. Alternative 2 and Alternative 5 designate additional mixed use on the Forest. Mixed use allow for use by both highway legal and non-highway legal vehicles. Mixed use was approved by the California Highway Patrol and by the Regional Forester.

Public comment 4: One commenter states that it a misnomer to call unpaved roads passenger car roads, since most use is done by high-clearance vehicles [34].

***Response*:** The category of ML 2 road addresses this question. This level is assigned to roads open for use by high-clearance vehicles. Generally, this level is not suitable for passenger cars. Surface smoothness is not a consideration, and the surface is normally unpaved native materials.

Public comment 5: Several respondents ask that the Forest allow mixed use on all unpaved level 3 to 5 roads where it is safe [34, 7, 40].

***Response*:** All of Modoc National Forest ML 4 and 5 roads are paved. Alternative 5 provides mixed use on ML 3 roads on the Forest. Alternative 2 also provides mixed use on ML 3 roads, but to a lesser amount than Alternative 5. These roads are not paved. Refer to the description of alternatives in chapter 2 of the FEIS.

Public comment 6: The region's mixed-use policy invalidates your mixed-use proposals on passenger car roads greater than three miles [34].

***Response*:** Based on Forest Service Manual 7715.77 (5), Motorized Mixed Use of National Forest System Roads, decisions on motorized mixed use, like other travel management decisions, is the responsibility of the Responsible Official, in this case the Forest Supervisor. If the Forest Supervisor wishes to provide for mixed use on ML 3 roads, a mixed-use analysis is required and needs to be reviewed by the Regional Engineer. The final decision is determined by the Regional Forester (Regional Forest Team), in consultation with the Forest Supervisor. The Regional Forester and the California Highway Patrol approved mixed use for the Modoc National Forest.

Public comment 7: One respondent states that proposing "combined use" designations on 544 miles of ML 3 roads requires conformance with Section 38026 of the California Vehicle Code [34].

***Response*:** Combined use is a California Highway Patrol designation. Mixed use is a Forest Service designation, and mixed use is provided for in Alternatives 2 and 5.

Public comment 8: One respondent asked if the process for designating lengths of over three miles for mixed use as proposed by the RO is followed, how many proposals will be approved [34]?

***Response*:** See the FEIS, Chapter 3, Transportation; also appendix N. The Regional Forester approved mixed use for ML 3 roads over three miles.

Public comment 9: One respondent asks that we explain in the FEIS how the Regional Forester can cite the California Vehicle Code to prohibit mixed use on National Forest System passenger roads, but then allow it on certain roads that are far greater than three miles. This is in conflict with section 38026 of the California Vehicle Code [34].

***Response*:** The Regional Forester's letters addressing mixed use are clear on this issue. Information on mixed use for Alternatives 2 and 5 is available in chapter 3 of the FEIS.

Public comment 10: The Forest Service does not have enough mixed-use accident data from Region 5 Forests to adopt a regional policy that prohibits mixed use on thousands of unpaved roads in California [34, 4].

Respo*n*se: Neither the Forest nor the California Highway Patrol has any record of any accidents involving mixed use on the Modoc National Forest.

Public comment 11: The Forest Service should approach the California Highway Patrol and California State Parks' Off-Highway Motor Vehicle Recreation Division to see if state safety requirements for minors need to be strengthened [34].

***Response*:** Safety requirements for vehicle operation for minors are the responsibility of the California Highway Patrol. The Forest Service has discussed safety requirements for all motor vehicle operations with them.

Public comment 12: Designating ML 3 roads for mixed use increases the threat of noxious weeds [33].

***Response*:** Based on our traffic count surveys for ML 3 roads, which counted 5 OHVs out of a total of 791 vehicles, the potential increase for noxious weeds is very low. Refer to the mixed-use analysis in the project recrod. Within the Botany, Environmental Consequences section, we addressed the potential indirect effects on Threatened, Endangered, and Sensitive plants from increased noxious weed risk.

Public comment 13: NEPA requires an analysis of routes proposed for mixed use. They must be analyzed for surface type and how additional vehicles would affect these roads [33].

***Response*:** Routes considered for mixed use are addressed in the Final Environmental Impact Statement, including appendix N. Further information on mixed use is available in the project record.

Public comment 14: Do not cite the Highway Safety Act (HSA) as a reason for prohibiting motorized mixed use on National Forest System roads [34].

Response: We agree that the HSA does not directly relate to prohibition of motorized mixed use and is actually a safety regulation.

Multiple Use

Public comment 1: Motorized use is being unfairly valued against other use on the Forest [45].

***Response*:** The purpose of this action is to manage use of motorized vehicles across the Forest.

The Travel Management Rule of 2005 requires designation of those roads and trails that are open to motor-vehicle use, and the prohibition of cross-country travel.

National Forests are managed by law for multiple use. The Multiple Use Sustained Yield Act defines multiple use, in part, as "...management of all the various resources of the National Forests so that they are utilized in the combination that will best meet the needs of the American people." The act does not prohibit motorized use.

Prohibition of motor vehicles would not meet part of the Purpose and Need for this project: (1) to provide motorized access to dispersed recreational opportunities, and (2) to provide a diversity of motorized recreational opportunities.

National Environmental Policy Act (NEPA)

Public comment 1: Some respondents state that the decisions concerning which new routes to designate are arbitrary, and that no method of analysis is given for determining which unauthorized routes were added to the National Forest Transportation System [33].

***Response*:** The basis for addition of unauthorized routes is founded in the Final Travel Rule, 36 CFR Parts 212, 251, 261, and 295—Travel Management; Designated Routes, and Areas for Motor Vehicle Use. We heard from the public that they use the routes across the Forest for recreation and for making a living. The Forest felt that the addition of routes would be appropriate for recreational access unless there was conflicting and immitigable resource damage that would occur with the addition. See the travel analysis process response section in this document. Chapters 1 and 2 of the FEIS further describe the public involvement process and development of alternatives.

Public comment 2: One group states that the FEIS should state how the Forest will ensure specific unauthorized routes are adequately evaluated pursuant to NEPA requirements. Was environmental analysis or public involvement done adequately to insure that the routes are not poorly located or cause unacceptable impacts [41]?

Response: Public involvement was done throughout the process ,and is documented in Chapter 1 of the FEIS. Environmental analysis was done using an interdisciplinary team, and by each of the resource specialists. It is documented in Chapter 3 of the FEIS.

Noise

Public comment 1: the DEIS inadequately considers the potential impacts of the propagation of engine noise around roads and trails in either its route-specific assessment or its analysis of cumulative impacts of the motorized system [33].

Response: Motorized use on the Modoc NF is extremely low and is not expected to increase through this action. We do not expect a significant increase in use, and therefore do not expect a significant increase in noise with this action. The elimination of cross-country travel will reduce or eliminate noise in areas that are inaccessible by road.

Not Adding Routes (Appendix A-1 of the DEIS)

Public comment 1: Display all unauthorized routes so that readers can understand why routes were not added to system.

***Response*:** This information is available upon individual request and currently resides in the project record. Routes were generally not added to the system if there was an existing or potential conflict with other resources that could not be mitigated.

Open Areas

Public comment 1: Open areas should be created on the Forest [3].

***Response*:** The Federal Register Vol. 70, No. 216/ Wednesday, November 9, 2005, p. 68274 states, "Under the Travel Management Rule, no administrative unit or Ranger District will be required to designate an area." The Responsible Official for the Modoc National Forest chose to not designate additional (open) areas, but to add appropriate unauthorized routes.

Over-Snow Vehicles

Public comment 2: Why are over-snow vehicles not addressed in the DEIS [3]?

***Response*:** See 36CFR212.81. Over-snow vehicles will be addressed in Subpart C. This action addresses only Subpart B of the Travel Management Rule, so it is not appropriate to address over-snow vehicles in this process.

Parking

Public comment 1a: Some respondents state that parking should be permitted within 30 feet from any designated road or trail when it does not cause resource damage [34].

Public comment 1b: Some respondents state that the Forest should restrict parking (dispersed camping) to one vehicle length or a 300-foot corridor rather than adding spurs [31].

***Response*:** The Forest Service Manual 7716.1 (1) – Content of Designations states,

> A designation of a road or trail includes all terminal facilities, trailheads, parking lots, and turnouts associated with the road or trail. The designation also includes parking a motor vehicle on the side of the road, when it is safe to do so without causing damage to National Forest System resources or facilities, unless prohibited by state law, a traffic sign, or an order (36 CFR 261.54). Road designations must specify either that they include parking within one vehicle length of the edge of the road, or within a specified distance of up to 30 feet from the centerline of the road.

The Forest has chosen to add spurs that access dispersed camping; in many cases these are extensions of existing system routes. Parking will be allowed one vehicle length, or a maximum of 30 feet, from designated roads.

Permitted Use

Public Comment 1a: Several respondents would like to see a change in grazing and woodcutting permits to include permanent language in the permits [42, 40, 35, 9].

Public Comment 1b: One respondent states that the terms and conditions of fuelwood permits should comply with the principles of the 2005 Travel Management Rule [34].

Public Comment 1c: One respondent asks that woodcutting permits be amended to restrict vehicle travel to no more than 100 feet from the road. This should be analyzed in the FEIS [34].

Response: The permitting process is outside the scope of this action as stated in the Travel Management Rule 36 CFR 212.51 (a) (8). Permitted use is specifically authorized under a written authorization issued under Federal law or regulations.

Plan Direction

Public comment 1: Minimize cumulative watershed impacts on stream channel condition and water quality [must be analyzed] by assessing the effects of each land-disturbing activity prior to its undertaking [43].

***Response*:** This undertaking does not include land-disturbing activities. The unauthorized routes proposed to be added to the road system already exist.

Primitive and Semi-Primitive Non-Motorized Recreation Opportunity Spectrum

Public comment 1: The DEIS is proposing to designate two ML 2 routes and add three new unauthorized routes in the Primitive Recreation Opportunity Spectrum area [33].

***Response*:** An error was made during the map-making process. It was not the intention of the Forest to add routes in the primitive Recreation Opportunity Spectrum areas. This error will be corrected prior to publication of the FEIS.

Private Property

Public comment 1a: Do not show routes that cross private property on the Motor Vehicle Use Map. Add signs to help keep people out of private property [5, 28].

Public comment 1b: Routes that cross private property where the Forest Service does not have a right-of-way or easement, should not be displayed on the Motor Vehicle Use Map.

Public comment 1c: Private landowners can sign their property if they want to restrict public access. The lack of a formal or legal road agreement across private ownerships should not eliminate unauthorized routes from designation [34, 3].

***Response*:** The final rule requires responsible officials to recognize rights of access in designating roads and trails 212.55(d)). Rights of access include valid existing rights and rights of use of National Forest System roads and National Forest System trails under § 212.6(b). This final rule does not affect reciprocal rights-of-way between the Forest Service and private landowners. Some property owners may also possess reserved or outstanding rights-of-way or other rights providing access across National Forest System lands. These may or may not require a written authorization from the Forest Service. Those rights must be recognized under § 212.55(d). Although many private landowners allow recreational use of their lands, it is at the discretion of the landowners what public access, if any, occurs on their lands. The Forest Service does not have the authority to dictate the use of private lands by private landholders, and does not have the authority to display any lands without right-of-ways on the Motor Vehicle Use Map or to direct the public to cross private lands where a right-of-way does not exist.

Public comment 2: The road marked at 48N67 is shown as a Forest Service road. It is not 5.

***Response*:** Thank you for your comment. The 48N67 road is not a Forest Service road once it crosses the private land boundary. This road will not be shown on the Motor Vehicle Use Map.

Purpose and Need

Public comment 1: The Purpose and Need statement is insufficient to set up a proper and complete analysis [33].

***Response*:** We see no evidence that the Purpose and Need impedes our ability to conduct a complete effects analysis. The Purpose and Need is established by the Responsible Official. In this case that

purpose addresses the designation of motorized routes and prohibition of cross-country travel (unless authorized by designated line officers).

Public comment 2: Travel analysis must evaluate and address the environmental, social, and cultural impacts associated with unauthorized routes and system routes on a landscape scale [33].

Response:

Per Forest Service Handbook 7709.55, Chapter 20,

> Use travel analysis … to inform decisions related to the designation of roads, trails, and areas for motor vehicle use per 36 CFR 212.51, provided that travel analysis is not required to inform decisions related to the designation of roads, trails, and areas for those administrative units and ranger districts that have issued a proposed action as of January 8, 2009.

The Modoc National Forest was not required to do travel analysis at any specific scale for this project. However, the environmental, social and cultural impacts of this action are addressed in chapter 3 of volume 1 of the FEIS.

Ranking Tables

Public comment 1: Some commenters were confused by the ranking tables for each resource and did not understand what was being displayed [3].

***Response*:** The Forest has realized that the ranking tables are not a good way to accurately explain the relationship between the alternatives and the effects on the environment. We also felt that the tables are confusing for the public and did not portray any additional accurate information. Therefore, we have decided to remove the ranking tables from the FEIS document and replace them with a summary paragraph.

Recreation

Public comment 1: Several respondents state that OHV use is a very small percentage of use on the Forest, but creates a disproportionate amount of disturbance and resource damage [45,32,18].

Response: As stated in the Travel Management Rule, as part of the evaluation criteria for designating roads and trails where motor vehicle use will be allowed, the Forest Supervisor must consider the effects of route designations on conflicts among uses of National Forest System lands. The Recreation section, Environmental Consequences in chapter 3 of the FEIS discusses the possible conflicts among uses that would result from implementing each of the alternatives. Because of the low use on the Forest, the potential for conflict is considered to be low.

Public comment 2: One respondent asked that the FEIS should include the total number of routes that access dispersed campsites in the discussion of measurement indicator 3 (DEIS, p. 70). [34]

***Response*:** Measurement indicator 3 looks at the impact of proposed changes in the National Forest Transportation System to motorized access to dispersed recreation opportunities, by alternative. The method used to compare alternatives was miles of proposed routes accessing dispersed sites. In the FEIS we analyzed the number of routes that accessed dispersed recreation opportunities, not just campsites.

Alternative 1 is unique among the alternatives in that there are no proposed changes to the National Forest Transportation System, and that cross-country travel would continue.

Public comment 1: The MDF proposal is not in line with its neighboring forest's proposals; their restrictions may increase use on the Modoc [43].

Response: It is impossible to predict how restrictions on other forests will affect use on the Modoc. However, based on historical use of the Forest, we expect use to remain similar to what it is currently. Furthermore, communication with neighboring forests regarding this proposal is ongoing.

Roadless Areas (Citizen-Inventoried and Agency)

Public comment 1: No roads should be added in Agency Inventoried Roadless areas, Citizen-Proposed Wilderness Areas, or Semi-Primitive Non-Motorized Areas [32].

***Response*:** No roads will be added in the agency-designated roadless areas. The citizen-proposed areas are currently roaded, and the addition of routes is addressed in chapter 3 of the FEIS. Alternative 3 does not add any roads to the NFTS.

Public comment 2: National Forest Transportation System routes in the Callahan SPNM (46A21MA and MB, 46N16A, 46A17BB and 46A17B) are completely overgrown and should not be shown on the Motor Vehicle Use Map [43].

***Response*:** Not showing a route on the Motor Vehicle Use Map is in reality removing the road from the National Forest Transportation System. Closing existing system roads is beyond the scope of this project. However, project level analysis can be done to add or decommission routes as necessary.

Public comment 3: The DEIS did not analyze the impacts of the existing system routes on wilderness [31, 33, 23, 17].

***Response*:** Wilderness areas are closed to motor vehicles by statute 212.55(e):

> Wilderness areas and primitive areas. National Forest System roads, National Forest System trails, and areas on National Forest System lands in wilderness areas or primitive areas shall not be designated for motor vehicle use pursuant to this section, unless, in the case of wilderness areas, motor vehicle use is authorized by the applicable enabling legislation for those areas.

Chapter 3 contains a section on the impacts of adding roads in wilderness areas. Examining the impacts of existing system routes is beyond the scope of this action.

Roads - Appendix N of the DEIS

Public comment 1: One responder requested that the Forest define traffic service levels in the DEIS [34].

***Response*:** Traffic service levels were listed in the engineering reports for mixed-use analysis. However, they were not used in the analysis because they did not add analytical value. For information, traffic service levels are defined as follows:

a. free-flowing with mixed traffic

b. congested during heavy traffic

c. flow interrupted; use limited

d. slow flow or may be blocked

Public comment 2: The traffic count is not scientifically valid [34].

Response: The traffic counts provide detailed information of vehicle use on ML 3 routes and validated our knowledge—gained by observation—that motorized recreation use on the Modoc National Forest is very low. The sample points were located at entry points to the Forest and other places where the highest use was anticipated. The traffic counts are considered adequate for the purposes for which they were used. Traffic counts were also conducted on sampled ML 2 roads.

Public comment 3: One responder suggested that maintenance levels on all roads be lowered to match the existing vehicle use. The most common vehicle type is a high-clearance vehicle [34].

***Response*:** Most of the vehicles using our roads are high-clearance vehicles. However, other factors such as user comfort, travel speed, transportation efficiency, and vehicle maintenance costs are also considered when assigning a maintenance level to a road. As stated in Forest Service Manual 7716.11 – Vehicle Class (4),

> Designation of routes for motor vehicle use does not imply that they can conveniently and safely accommodate all uses encompassed by the designation. Designation does not invite or encourage use, but merely indicates that use is not prohibited under 36 CFR 261.13.

Public comment 4: One responder requested information regarding criteria and benchmarks used to determine crash probability and severity [34].

***Response*:** The factors considered are included in the mixed-use analysis in the project record. A description of crash probability and severity is presented in this appendix.

Public comment 5: One commenter stated that traffic counts should not be taken at intersections [34].

***Response*:** Traffic counts were taken at intersections to more efficiently gather data. One person stationed at an intersection can count the traffic on two or more roads. In some cases this results in one vehicle being counted twice (once on each road). However, this still results in a satisfactory count for vehicles using each individual road.

Public comment 6: How did we determine average speed [34]?

***Response*:** The average speeds listed are a professional estimate of the 85th percentile speed, the speed at or below which 85 percent of the motorized vehicles travel. No specific speed studies were conducted.

Route-Specific Comments

Public Comment 1: One group submitted a spreadsheet containing several routes they would like to see not be added to the National Forest Transportation System because of various resource concerns. [33]

Response: These routes were removed for addition in Alternative 4. Potential effects of Alternative 4 and the other action alternatives (2,3, and 5) are disclosed in chapter 3 of the FEIS.

Safety

Public comment 1: One group states that several members of the public have had close calls with ATV riders while operating cattle trucks on these roads. Build some flexibility into this decision and monitor for safety and revise if safety issues emerge [42].

***Response*:** The Motor Vehicle Use Map will be updated when needed and re-issued annually. If safety issues arise, the mechanism is already in place to revise the Motor Vehicle Use Map annually. Furthermore, the Responsible Official has the authority to take immediate action to make corrections if an unsafe situation is discovered. Forest Service Manual 7716.51, Temporary Emergency Closures 1 states,

> If the Responsible Official determines that motor vehicle use on a National Forest System road, a National Forest System trail, or in an area on National Forest System lands is directly causing or will directly cause considerable adverse effects on public safety, soil, vegetation, wildlife habitat, or cultural resources associated with that road, trail, or area, the Responsible Official shall immediately close that road, trail, or area to motor vehicle use (36 CFR 212.52(b)(2)).

Scope of the Project

Public comment 1: One group suggests that limited funding and schedule constraints and resources are not adequate reason to limit scope of the project [41].

> ***Response*:** The Responsible Official has the authority to determine the scope of the Proposed Action, and to determine which actions are undertaken annually as part of the Forest's program of work. Although funding and other constraints are nearly always a concern in conceiving and developing agency actions, the action and alternatives considered in this EIS were determined by the stated Purpose and Need, not the rationale as described in this comment. Here, the Purpose and Need is to implement Subpart B of the travel management regulations and especially Subpart B's prohibition on cross-country travel. Because this prohibition would eliminate many popular and important recreational opportunities, the Forest Service also identified the need to consider potential additions to the National Forest Transportation System to continue to provide motorized recreation opportunities and access to non-motorized recreation activities.

Public comment 2: Several respondents ask that the scope be expanded to include current roads and trails with known impacts [42, 44].

> **Response:** The scope of the proposal is directly related to the Purpose and Need for action. Please see the responses provided to comments regarding reviewing the existing National Forest Transportation System and identification of the minimum system. See response under Minimum Road System comments. However, as part of the current analysis, the Forest Service identified a road with resource impacts. The Boles Creek road was removed from the National Forest Transportation System because of known resource damage. There were no additional roads identified during this process. However, it is policy to address impacts from roads as they occur. This is done by the District Rangers and the engineering department through its annual maintenance program.

Public comment 3: Several respondents suggest that since the Forest Service has not included alternatives that consider road closures on the existing National Forest Transportation System, a full range of alternatives has not been evaluated [33, 41, 4].

> **Response:** The purpose and need for action determines the range of alternatives considered in detail in the FEIS. The purpose and need for the current action is to address unmanaged cross-country travel and to implement Subpart B of the travel management regulations, while maintaining important motorized access and recreational opportunities for the public. The purpose and need is not to examine the existing National Forest Transportation System for potential road closures. Please also see response to comment above. The travel management regulations (36 CFR 212.50(b)) state,
>
> > The responsible official may incorporate previous administrative decisions regarding travel management made under other authorities, including designations and prohibitions of motor vehicle use, in designating National Forest System roads, National Forest System trails, and areas on National Forest System lands for motor vehicle use under this subpart.
>
> The "Scope of this Action", as defined in Chapter 1 of the EIS also states,
>
> > This proposal does not revisit previous administrative decisions that resulted in the current NFTS. The current NFTS was developed over many decades and provides access for fire suppression, vegetation management, biomass production, wood cutting, permit implementation, private land access and a host of other purposes. This proposal is narrowly focused on implementing the Travel Management Rule. Previous administrative decisions concerning road construction, road reconstruction, trail construction, and land suitability for motorized use on the existing NFTS are outside of the scope of this proposal.

A Forest-scale analysis of the existing National Forest Transportation System for closures requires consideration of a different and broader set of management needs than the current proposal. Such an analysis would make the current analysis effort more complex. It would exceed our capacity to complete Subpart B, thus further delaying implementation of the needed prohibition on cross-country travel.

Public comment 4: The proposal focuses too much on analyzing the potential impacts of designating new unauthorized routes, and not enough on assessing the impacts of the existing system of roads [41, 27].

> **Response:** As noted above, the identified need for action is to implement the prohibition on cross-country travel contained in Subpart B of the travel management regulations and to identify for potential addition to the National Forest Transportation System those user-created routes that are well-situated and provide important access and recreation opportunities. The FEIS appropriately focuses on the direct and indirect effects associated with the proposed action and alternatives. However, the entire road and trail system was considered in the cumulative effects analyses in the EIS, including National Forest Transportation System roads and trails, unauthorized routes, state, county and Federal roads, and routes on private lands.

Public comment 5: One group suggests that the travel management process should be used to create a better motorized travel system—one that minimizes impacts to natural resources, roadless backcountry, opportunities for quiet and solitude, and non-motorized visitor experiences [32].

> **Response**: This travel management document seeks to define where motorized vehicles will be allowed to travel, and evaluate the impacts of that motorized use, including the impacts identified in this comment. The decision regarding which areas of the Forest should be allocated to motorized and non-motorized activities was previously made in the Forest Plan. The decision will be reconsidered in Forest Plan revision, which is expected to be completed over the next several years.
>
> In addition, none of the alternatives proposes any new additions to the National Forest Transportation System that have a significant impact on the character of agency Inventoried Roadless Areas.

Seasonal Closures

Public comment 1a: The DEIS does not provide information on wet-weather conditions and related environmental impacts [41].

Public comment 1b: Closures should be based on weather-related criteria, and not set dates (DEIS, p. 22) [41].

> ***Response*:** The Travel Management Rule allows for seasonal designations: "...if appropriate, the times of year for which use is designated." (36 CFR § 212.56.) The Motor Vehicle Use Map, the enforcement instrument, is printed annually. It is necessary to establish dates for seasonal restrictions when these designations are part of the Motor Vehicle Use Map. The timing of the seasonal restrictions was based on historical data and local knowledge. The dates were determined based on annual averages of soil moisture, with the understanding that there would be considerable variation.

Public comment: Some respondents suggest that there should be enforced seasonal closures on all unpaved routes during winter months and during peak game migration periods.

> ***Response:*** Closures on all unpaved roads during the winter months are not necessary, and would unnecessarily limit travel across the Forest. Areas that are affected by wet weather were identified, and closures were put in place in the FEIS.

Soils and Hydrology

Public comment 1: The cumulative watershed effects (CWE) analysis is inadequate. The soils and hydrology section does not disclose cumulative impacts [33].

***Response*:** Approximately 80 of the 120 6th field sub-watersheds located on the Modoc National Forest were analyzed for the potential for an adverse cumulative effect to soil and water quality. The other 40 watersheds do not have proposed unauthorized routes in them. The Forest hydrologist, in conjunction with the regional hydrologist, developed a modified approach to cumulative effects. This approach was based on local geomorphic factors (slope, hillside stability, soil sensitivity, and watershed sensitivity). Seventy-one of the 80 watersheds used this modified approach.

The remaining nine 6th field sub-watersheds that included proposed routes were analyzed for cumulative watershed effects, using the Region 5 cumulative watershed effects analysis model. Included in this analysis were the existing condition, proposed action, and potential foreseeable action. We did not analyze impacts of all five alternatives. Instead, we chose the alternative with the most acres of soil disturbance to analyze for potential cumulative impacts. The results of both the modified CWE analysis and the Region 5 CWE analysis model were disclosed in the cumulative effects section of the hydrology and soils section of the FEIS.

Public comment 2: Where are the streams that have PFC (proper functioning condition) rating of "at risk", and how will designating routes affect recovery [33]?

***Response*:** The streams identified as FAR (functional at risk, referring to proper functioning condition, or PFC rating) were used in the development of the threshold of concern (TOC) used in the Region 5 CWE Analysis. In general terms, the reaches of streams that were identified as FAR are located in the Warner Mountains. Since the majority of the FAR routes to be designated are pre-existing skid trails and temporary roads and are for the most part not actively eroding or adversely affecting the stream channels stability, it is unlikely that designating these routes would adversely affect the stream recovery. Only one route in the Warner Mountains is actively eroding. The Forest has committed to installing additional water bars in 2010 to resolve this situation.

Public comment 3: Where is the RCOA (riparian conservation objectives analysis) for the routes within the riparian conservation areas (RCAs)?

***Response*:** No separate, standalone riparian conservation objectives analysis was completed. However, the fundamental riparian conservation objective (RCO) was used in the analysis completed to determine if direct, indirect, or cumulative effects to soil or water quality would occur by designation of these routes to the transportation plan. Riparian conservation areas are addressed in Chapter 3, Soils and Water.

Public comment 4: The DEIS fails to comply with the Modoc NF Land and Resource Management Plan (LRMP) soils and watershed standards and guidelines. The DEIS does not include any analysis to determine average soil loss and whether this project would result in exceeding the allowable soil loss.

Response: The LRMP standards and guidelines were disclosed in the hydrology and soils section of the FEIS. The LRMP soils and watershed standards and guidelines are based on Region 5 soil quality standards (R5 SQS) and best management practices (BMPs).

The specific LRMP standard and guideline referenced in this comment is as follows:

Design management activities not to exceed an average allowable soil loss of one ton per acre per year

There was no direct soil measurement to determine whether the amount of soil loss was less than one ton per acre per year. However, the standard sets an average allowable soil loss of one tone per acre

per year. This method used was to determine if the proposed route met the effectiveness measure from BMPEP T02 Form. These measures are as follows:

1. Erosion on skid trail surface: little or no evidence of rills
2. Rutting: little or no evidence of rutting
3. Water bars
    a. Diversion of runoff: less than10 percent of water bars fail to divert flow off skid trail
    b. Sediment below: sediment deposition absent, or does not extend beyond outlet control
    c. Erosion below outlet: no evidence of rills or gullies
4. Sediment to channel: no evidence of transport to the streamside management zone (SMZ)

If the above-referenced standards were met, the effectiveness measurement was fully successful and was consistent with soils and hydrology standards and guidelines.

Approximately 150 routes were field checked across the Forest to determine if these routes were consistent with LRMP standards and guidelines for soils and hydrology. Of these routes, only one short stretch of one route was identified as not meeting the above-referenced standard and guideline (erosion on skid-trail surfaces: minor departure as less than 20 percent of skid-trail surfaces). Since this route did not receive a fully successful rating, but rather a minor departure from fully successful, it was reasoned that this skid trail or proposed route did not meet the LRMP standard and guideline for allowable soil loss. This route will receive additional water bars in 2010 to eliminate the active eroding.

Public comment 5: The Modoc NF must carefully adhere to the Modoc NF LRMP when making a proposal.

***Response*:** Noted. The alternatives proposed adhere to LRMP direction for management of National Forest System (NFS) lands on the Modoc National Forest.

Public comment 6: Stream crossings are required to be designed to pass a 100-year flood for passage of aquatic fauna [45].

***Response*:** This public concern applies to only those portions of the Forest that are covered by the Northwest Forest Plan (NWFP). There is a small amount of the Forest that is covered by the NWFP. Where a stream crossing for a perennial or seasonally flowing stream consists of a low-water crossing or ford, a fisheries biologist is routinely consulted during the planning phase to determine if the in-channel structure would allow for the passage of aquatic fauna.

In consultation with Engineering, where existing culverts or bridges on perennial or seasonally flowing streams are upgraded within the NWFP, appropriate size of structure will be used to allow for the passage of the 100-year storm flow and passage of aquatic fauna.

Public comment 7: The soils and hydrology section does not disclose both site-specific and cumulative impacts.

***Response*:** The Soils and Hydrology, Environmental Consequences section of the FEIS discloses site-specific and cumulative impacts. Please see the response to the first comment in this section (above) regarding the methodology used for the cumulative effects analysis for hydrology. The methodology used to conduct a site-specific analysis of direct and indirect effects to soils and hydrology is described in the FEIS and included a review of [explain what was used for all routes, e.g., GIS database, existing soil maps, etc.] In addition, the Forest conducted field surveys of approximately

150 routes across the Forest to determine if these routes were consistent with LRMP standards and guidelines for soils and hydrology. Of these routes, only one short stretch of one route was identified as exceeding the soil loss standard. This information is disclosed in the hydrology and soils section of the Travel Management FEIS.

The Forest hydrologist determined that with the application of site-specific BMPs, it is unlikely that the designation of pre-existing routes to the transportation plan would result in an adverse direct, indirect, or cumulative effect to soil or water quality. This finding was stated in the hydrology and soils section of the Travel Management FEIS.

Public comment 8: The soils and hydrology section describes an eight-step process in the Effects Analysis section for determining the acceptability of routes, but there is no documentation of this having actually occurred.

***Response*:** The process was completed using GIS-generated data and maps from the corporate GIS data base for soils and hydrology, and direct field observations obtained by a resources crew and the Forest hydrologist. This data was then used in determining which routes should be field reviewed, based on the risk factors for direct and indirect effect to soil quality. The results of the field review were disclosed in the Travel Management FEIS.

Public comment 9: There is no actual, site-specific information regarding soil types, erosion hazard, existing condition, slope stability, or needed mitigations.

***Response*:** Soil type, soil erosion hazard, and slope stability information were obtained from the following publications: Soil Survey of Intermountain Area, Soil Survey of Surprise Valley-Home Camp Area, and Modoc Forest Area of California. The existing conditions and site-specific information were obtained from a field review by the Forest hydrologist. The results of the field review did not indicate that additional mitigation measures were necessary to protect soil and water quality in excess of best management practices and Modoc NF LRMP standard and guidelines for soils. This conclusion was disclosed in the direct and indirect effects section of the soils and hydrology section of the Travel Management FEIS.

Public comment 10: Which existing or proposed new routes are on the patches of soil that have a high or high-to-very high maximum erosion hazard rating?

***Response*:** Sixty routes in the Warner Mountains were identified on soils that had a high-to-very high maximum erosion hazard rating. All 60 routes were field-checked by the Forest hydrologist, and only one route was found to be actively eroding, and thereby exceeding LRMP standards and guidelines. This route will receive additional water bars in 2010 to eliminate the active eroding. This information is disclosed in the direct and indirect effects section of the soils and hydrology section of the FEIS.

Special Designations

Public comment 1: No roads should be added in agency Inventoried Roadless Areas [32].

***Response*:** No unauthorized routes are proposed to be added to the system in agency Inventoried Roadless Areas.

Public comment 2: The ROD should be consistent with the 2006 petition from the State of California to the Secretary of Agriculture, requesting that 100 percent of all Inventoried Roadless Areas in CA remain in their current condition. This means that no new roads or trails should be built or developed in Inventoried Roadless Areas [32].

***Response*:** No unauthorized routes are proposed to be added in Inventoried Roadless Areas in this action.

Subpart A of the Travel Management Rule

Public comment 1: Subpart A should immediately follow Subpart B [32].

> ***Response*:** Thank you for your comment. The Region is in the process of developing guidelines for addressing Subpart A. The Forest will address Subpart A as funding and personnel become available. Travel analysis for purposes of identification of the minimum road system is separate from travel analysis for purposes of designation of roads and trails for motor vehicle use. Travel analysis for both purposes may be conducted concurrently or separately (Forest Service Manual 7712 (2)). See the next response for an explanation of Subparts A and B of the Travel Management Rule.

Public comment 2a: The Forest Service did not follow 36 CFR, part 212, Subpart A because it did not identify a minimum road system needed [41].

Public comment 2b: The Modoc National Forest has not identified the minimum road system needed for safe and efficient travel and protection of Forest Service lands [33, 27].

Public comment 2c: Close and decommission National Forest Transportation System routes that are duplicative.

Public comment 2d: The FEIS should describe the information used to formulate the alternatives and their relationship to the minimum road system needed for safe and efficient travel and administration of the National Forest Transportation System [41].

Public comment 2e: The Forest Service did not address known, road-related resource impairments and use conflicts of both the existing National Forest Transportation System and unauthorized routes [41].

> ***Response*:** The Purpose and Need for action determines the range of alternatives analyzed in detail in the FEIS (FEIS, Chapter 1, Purpose and Need). The FEIS analyzes resource impacts and any use conflicts associated with routes proposed for addition to the National Forest Transportation System. The existing National Forest Transportation System is included in the cumulative effects analyses provided for each resource. The existing National Forest Transportation System is maintained to meet certain standards, and where substantial resource concerns are occurring, the Forest plans to address those concerns. See response above regarding Subpart A.

Terrestrial Wildlife

Public comment 1: The DEIS does not appear to describe or address the presence or absence of wildlife corridors…or movement [41, 33].

> ***Response*:** Although not specifically addressing corridors for any single species, corridors and effects to wildlife movement are considered within the analysis. Wildlife movement was considered during the interdisciplinary team process that was used to examine each known unauthorized route. The document does address impacts to wildlife movement as reflected in metrics such as the Disturbance Index for ungulates, the Security Index for goshawks, and the Habitat Influence Index for goshawks. These indices provide a means of comparing impacts of the alternatives on wildlife disturbance and the impact of the presence of a route. Although not specifically addressed, wildlife movement is inherently addressed by the comparison of indices between alternatives. For many of the indices used there were only minor or no differences between alternatives. This lack of difference indicates limited impacts from unauthorized routes because there were limited differences between Alternative 3 (which would not add any routes to the National Forest Transportation System), Alternative 2 (the Proposed Action) and Alternative 1 (the existing condition).
>
> Additionally, 66 percent of the routes proposed for addition under Alternative 2 and Alternative 5 (the alternatives with the most routes added to the National Forest Transportation System) are less than ¼ mile in length. The short length of these segments would appear to provide limited impact to

movement of larger mammals because the unauthorized routes already exist on the landscape. Migratory wildlife have already included the effects of these routes in their current movement patterns. Thus the document, although considering impacts of routes at a watershed level through the various indices, focuses on more salient points of concern to wildlife such as impacts to habitat over time.

Public comment 2: The DEIS does not appear to describe or address the presence or absence of …habitat integrity [41, 33].

***Response*:** Each of the species group discussions describes miles of route within habitat (both to be added to the National Forest Transportation System and the amount of National Forest Transportation System), as well as describes qualitative impacts to habitat and individuals. Most of the group discussions also include a comparison of indices across alternatives by sixth-order watershed. The document provides a comparison of existing condition (Alternative 1), least vehicular traffic action (Alternative 3) and intermediate actions (Alternatives 2, 4, and 5). In addition, cumulative effects for each species group are discussed and analyzed for the foreseeable actions and the actions proposed in this EIS. The combination of indices, range of alternatives, and cumulative effects analysis does provide a description of habitat integrity for each of the species groups and for wildlife as a resource. Habitat integrity is adequately discussed in a manner to provide the decision-maker with a "hard" look within the scope of the action.

Public comment 3: The Modoc NF Travel Management Plan DEIS identifies management direction in the Modoc NF Land and Resource Management Plan for mule deer, a Region 5 management indicator species: "K. Within mule deer habitat: On deer winter ranges where OHV use is demonstrated to adversely affect deer, institute OHV closures from December 1 to March 31." However, the DEIS provides no map of deer winter range. Nor does it make any provision for the protection of critical fawning habitat.[33].

***Response*:** Because all alternatives except Alternative 1 would restrict motorized, wheeled traffic to designated routes, no OHV traffic would occur off designated routes during this period anywhere on National Forest system lands administered by the Modoc. Therefore, there is no need to include a map of wintering range in the FEIS. We disagree with the assertion that there would be no provision for protection of critical fawning habitat. The primary protection would be the cessation of cross-country travel in Alternatives 2-5. As discussed in the ungulate group section, the inventoried routes do not play a significant role in impacting deer. This can be seen in the lack of difference between Alternative 3 and Alternatives 1, 2, 4, and 5 in the habitat influence rankings.

Public comment 4: [The DEIS does not] make any provision for the protection of critical fawning habitat [33, 43].

***Response*:** As noted in Chapter 3, Terrestrial Wildlife, Affected Environment and Environmental Consequences, Alternatives 2 through 4 would have no acres open for cross-country travel. The unauthorized routes, when converted to equivalent-acres, would affect an area from 0 percent (Alternative 3) to 0.06 percent (Alternative 1) of the modeled mule deer habitat on the Modoc National Forest. See Public Comment 3 above.

Public comment 5: The DEIS suggests that winter and early spring seasonal restrictions in Alternative 2 would reduce impacts on 312 miles of road, but the impact is predicted to be undetectable because snow drifts currently make the roads unavailable. The trend in increasing use in winter of high-clearance, 4-wheel drive vehicles may contradict that suggestion.[33].

***Response*:** The winter and early spring seasonal closures proposed in Alternatives 2, 4 and 5 would prevent the use of high-clearance, 4-wheel drive vehicles within the closure areas. The impacts of the closures are undetectable in comparison to existing observed use where snow drifts prevent wheeled vehicle use.

Public comment 6: The analysis of the effects of adding unauthorized routes to the Forest transportation system is not scientifically valid. In addressing direct and indirect effects, the FEIS states that the differences between alternatives are essentially undetectable against the background fluctuations of weather and stochastic (random) events such as fires. The wildlife biologist who wrote this section provides no reference to published literature or scientific basis for this claim [33, 43].

***Response*:** The effects of stochastic (random) events on wildlife populations are so ingrained within the scientific literature that citation was not included. Since this concern was raised we have added a section to discuss the direct and indirect effects setting to the wildlife portion of Chapter 3.

Public comment 7: [T]he DEIS claims that because Alternative 2 contains only seven percent more routes in late-successional species habitat than Alternative 3, the difference is undetectable. The wildlife biologist who wrote this section provides no reference to published literature or scientific basis for this claim [33].

***Response*:** The Chapter 3 wildlife section compares effects not just as a percentage of mileage difference between alternatives, but also compares effects using the habitat influence index comparisons. The habitat influence index comparison is based on the Gaines et al. (2003) document. In addition, a description of the direct and indirect effects setting has been added to the document, providing further scientific basis for the level of stochastic (random) fluctuations that occur on the Modoc National Forest.

Public comment 8: We request that the Forest refer to the studies of impacts of roads and motor vehicles to wildlife that we included in our scoping comments [33].

***Response*:** Several of the studies in the commenter's scoping comments were used in the wildlife chapter, the draft biological evaluation, or the MIS report. These included the Birds of North America entry for Swainson's hawk by England, Bechard, and Houston (1997), Steidel and Anthony's 2000 paper in the Journal Ecological Applications, Verner et al's 1994 Technical Assessment of the California Spotted Owl, and Ruggierio et al's 1994 RM-GTR-254 document on conserving forest carnivores. In addition, our biologist was familiar with several of the other references provided by the commenter such as the Studies in Avian Biology number 31 technical assessment of goshawk status ecology and management (Morrison editor 2006), Lyon and Anderson's 2003 Wildlife Society Bulletin paper on impacts to sage-grouse, and the 1990 Interagency Scientific committee Report on the conservation strategy for the northern spotted owl.

Public comment 9: In addressing cumulative impacts, the document says that routes "can be converted to equivalent-acres by assuming each mile of route is approximately 1.8 acres based on a 15-foot wide impact. Thus the 35 miles of new roads added to northern goshawk habitat in the Proposed Action would be equivalent to approximately 64 acres, or about one percent of the area impacted annually by timber harvest for sawlogs or fiber. There are two flaws with this argument. The first is that the comparison is not warranted [33].

***Response*:** We feel that this analysis is warranted and appropriate under the cumulative-effects regulations. What this and other sections do is to place habitat loss (or gain) on an equivalent basis in order to analyze impacts to potential habitat trends within a cumulative effects setting. Cumulative effects are the "incremental impact of the action when added to other past, present, and reasonably foreseeable future actions" (40 CFR 1508.7). Additionally, the equivalent acres of habitat as a percentage of total habitat on the Forest (0.03 percent for Alternative 2) are disclosed in the biological evaluation.

Public comment 10: The [Proposed Action] Alternative should be compared to one that does not add new routes, not to the Forest's timber program [33].

***Response*:** The Proposed Action is compared to Alternative 3, which does not add new routes. Alternative 2 (the Proposed Action) is also compared to Alternatives 1 (the current condition), as well as Alternatives 4 and 5.

Public comment 11: The assumption that the impact from a 15-foot-wide road is 15 feet is not based on sound wildlife biology. The impact of a road to wildlife is not limited to the footprint of the road itself. Even a cursory examination of the scientific literature would provide many examples to counter this argument [33].

***Response*:** The impact to wildlife is larger than the footprint. Disturbance impacts were compared between alternatives using the zone of influence and habitat disturbance index. The commenter notes the use of these indices three paragraphs later in their comment letter to support the commenter's view that the National Forest Transportation System should be analyzed for closure.

Public comment 12: The Modoc NF Travel Management Plan DEIS identifies management direction in the Modoc NF Land and Resource Management Plan for mule deer, a Region 5 management indicator species

***Response*:** Mule deer are not a management indicator species for the Modoc National Forest.

Public comment 13: The Forest uses no scientific studies to determine the potential effect zone of roads open to motor vehicles, and thus, the analysis is speculative at best.

***Response*:** The biological analysis in the FEIS is based on the best available science known to the Forest staff at the time of document preparation. Gaines et al. 2003 is specifically quoted and used as a basis for a portion of the analysis. Gaines et al. 2003 is based on over 225 literature citations and provides a peer-reviewed process for analyzing the effects of linear routes on wildlife habitats. Other publications are noted in the methodology section, including Trombulek and Frissell 2000.

Public comment 14 (Same as Issue 3 Chapter 1 of the FEIS): The Modoc NF Travel Management Plan DEIS identifies management direction in the Modoc NF Land and Resource Management Plan for mule deer, a Region 5 management indicator species:

K. Within mule deer habitat: On deer winter ranges where OHV use is demonstrated to adversely affect deer, institute OHV closures from December 1 to March 31. However, the DEIS provides no map of deer winter range. Nor does it make any provision for the protection of critical fawning habitat [33]

***Response*:** Because all alternatives except Alternative 1 would restrict motorized, wheeled traffic to the National Forest Transportation System, no OHV traffic would occur during this period anywhere on National Forest system lands administered by the Modoc. There was no need to include a map of wintering range in the FEIS as the quoted direction is moot under any of the action alternatives. We disagree with the assertion that there would be no provision for protection of critical fawning habitat. The primary protection would be the cessation of cross-country travel in alternatives 2-5. As discussed in the ungulate group section, the inventoried routes do not play a significant role in impacting deer. This can be seen in the lack of difference between Alternative 3 and Alternatives 1, 2, 4, and 5 in the habitat influence rankings.

Public comment 15 (Same as Issue 5, chapter 1 of the FEIS): The DEIS suggests that winter and early spring seasonal restrictions in Alternative 2 would reduce impacts on 312 miles of road, but the impact is predicted to be undetectable because snow drifts currently make the roads unavailable. The trend in increasing use in winter of high-clearance 4-wheel drive vehicles may contradict that suggestion [33].

***Response*:** The winter and early spring seasonal closures proposed in Alternatives 2, 4 and 5 would prevent the use of high-clearance 4-wheel drive vehicles within the closure areas. The impacts of the closures are undetectable in comparison to existing observed use where snow drifts prevent wheeled vehicle use.

Public comment 16: Species associated with old forest ecosystems include: California spotted owl, Goshawk, American marten, Pacific fisher, Sierra Nevada red fox, wolverine, and a number of migratory bird species, all of which are found in the Modoc National Forest [33].

***Response*:** As noted in the late-successional group discussion in Chapter 3 of the FEIS, wolverine and Sierra Nevada red fox appear to be absent from the Forest.

Public comment 17: Among the notable species on the Modoc NF are the federally threatened subspecies of western snowy plover and northern spotted owl, as well as the California State Endangered bald eagle, American peregrine falcon, western yellow-billed cuckoo, willow flycatcher, and California State Threatened Swainson's hawk and bank swallow [33].

***Response*:** The federally threatened subspecies of western snowy plover is restricted to the Pacific coast population. Snowy plovers observed on the Modoc National Forest are members of the interior population. As noted in the Federal Register listing rule (Federal Register Vol. 58, No 42 page 12864 3/5/1993) for the Pacific coast population of the western snowy plover, this population is genetically isolated from western snowy plovers breeding in the interior. The yellow-billed cuckoo is not known to occur on the Modoc National Forest. The yellow-billed cuckoo in northern California is associated with Sacramento Valley riparian hardwood forests and habitats.

Travel Analysis

Public comment 1: Travel analysis should have been used to designate routes. The FEIS should describe how travel analysis was used in the route designation process.

***Response*:** The directives were published January 8, 2009 but apply to all new projects Forest Service Manual 7712.1. These projects began prior to the directives and are not subject to them. Future projects will all include travel analysis. This project used a process similar to travel analysis.

The Responsible Official determined that the scope of the analysis would be Subpart B, which is Forest wide in scale and focused on the prohibition of cross-country motor vehicle travel, the addition of unauthorized routes and changes to vehicle class and season of use. This would allow implementation of subpart B and the production of a Motor Vehicle Use Map in accordance with the Forest Service Chief's timeline.

Travel Analysis Steps

Public Comment 1: Several comments were made stating that the Forest did not do Travel Analysis for this project.

Response: The process for analysis can be found in the FEIS in Chapter 1 on pages 2-3.

Public comment 2: By not using travel analysis to analyze the entire system, the assessment of cumulative impacts is deficient under NEPA.

***Response*:** Cumulative effects of adding unauthorized routes are identified and described in Chapter 3 of the DEIS, and carried forward into the FEIS. The NFTS was considered in the Cumulative Effects analysis for each resource.

Unauthorized routes

Public comment 1: One responder suggested that we prohibit use on all unauthorized routes and replant with native vegetation.

Response: This project will not initiate road decommissioning, and therefore will not have the opportunity for replanting vegetation. Alternative 3 prohibits use on all inventoried unauthorized routes and prohibits cross country travel. The consequences and impacts associated with each of the alternatives are addressed in Chapter 3 of the FEIS.

Commenters on the Draft Environmental Impact Statement (DEIS)

C Robert Wells	1
Jim and Liz Robinson	2
Michael Damaso	3
Larry Ellenberger	4
Pete and Carolyn Carey	5
Phil Vermillion	6
Modoc County Sherriffs Posse	7
Earl S. Roberts	8
June Roberts	9
Jan and Gyla Kovialka	11
Mrs. Chuck Roethler	12
John Looper	13
Larry Laffoon	14
George and Francis Alderson	15
Lynn Hague	16
Lo I and Won Yin	17
Paul Moore	18
Claude Singleton	20
Rick Ferndon	21
Robert G. Nelson	22
Betsy Shade	23
Dearly Ellenberger	24
Robert D. Cameron	25
Mick Baldwin	26
Darca Morgan (Audubon Society)	27
John Morrow	28
Elizabeth Norton	29
Howard County Bird Club	31
Trout Unlimited	32
Wilderness Society	33
Recreation Outdoors Coalition	34
Modoc County Farm Bureau	35
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DOI - Lava Beds National Monument	37
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Comment Letters Received

Appendix N: Mixed Use

Mixed use on ML 3 roads for Alternative 5 – Modified has been approved by the Regional Forester for roads over 3 miles in length, see below. Mixed use for ML 3 roads less than 3 miles in length has been approved by the California Highway Patrol, see below.

Regional Forester's approval letter:

File Code: 7700 Date: August 26, 2009
Route To: (2350)
Subject: Approval of Mixed Use Analysis on the Modoc National Forest
To: Forest Supervisor, Modoc National Forest

I have received your April 24, 2009, 7700/2350 memo regarding Motorized Mixed Use on roads maintained for passenger cars and your detailed individual Mixed Use Analysis reports. Based on the recommendations of the Director of Engineering and in concurrence with the Office of General Council (OGC), I am approving the 51 roads proposed for Mixed Use as requested. In all cases, the Mixed Use Analysis for each road indicated there is a low probability of a moderate severity crash.

Prior to opening these roads to mixed use, the Forest shall develop and implement a sign plan, specifically addressing Mixed Use. The Forest shall use the Manual of Uniform Traffic Control Devices approved "Share the Road" warning sign, with an appropriate yellow diamond warning sign showing an ATV, as part of your signing safety plan. These warning signs shall be placed at strategic points throughout the Forest, so the recreating public has a clear understanding of where they can operate ATV's and where they cannot. The Forest should strongly consider adding additional regulatory signing for routes, where mixed use is specifically not allowed, to avoid confusion. All signing shall be in conformance with the latest addition of the Manual of Uniform Traffic Control Devises.

The Forest Supervisor shall inform the Regional Forester of any accidents on this road involving off-highway vehicles. The Regional Forester's approval for Mixed Use will be reconsidered if there are accidents on roads involving mixed use.

If you have any questions regarding mixed use, please contact George Kulick, Director of Engineering at 707-562-8841.

/S/ ANGELA V. COLEMAN (FOR)
RANDY MOORE
Regional Forester

California Highway Patrol's approval letter:

State of California **Business, Transportation and Housing Agency**

Memorandum

Date: July 22, 2009

To: Northern Division

From: **DEPARTMENT OF CALIFORNIA HIGHWAY PATROL**
Assistant Commissioner, Field

File No.: 002.A9293.09-0672.051

Subject: PROPOSED COMBINED-USE ROADWAY DESIGNATION - MODOC NATIONAL FOREST

The Modoc National Forest has requested combined-use highway designations for specific Maintenance Level 3 roadway segments within the Forest. It is understood that the proposed combined-use roadways are within the jurisdictional boundaries of Alturas, Redding, and Yreka Areas. All of the Areas have agreed the proposed segments will not pose significant safety-related concerns provided the Alturas Area's recommendations for signage are completed.

The request has been reviewed and is approved contingent upon completion of the following signage recommendation:

> Alturas Area recommended that information/cautionary signs be posted at the entrance to the improved campgrounds which include: Ash Creek, Big Sage, Cave Lake, C Reservoir, Cedar Pass, Jane's Reservoir, Patterson, Pepperdine, Plum Valley, Upper and Lower Rush Creek, Soup Springs, and Stowe Reservoir campgrounds.
>
> Additionally, Alturas Area recommends a sign be posted at the entrance to Lily Lake day use, due to limited sight distance and moderate use.

Alturas Area provided a thorough analysis of the proposed plan and I'm satisfied upon the completion of the recommended signing, public safety will be ensured.

If you have any questions, please contact Captain Paul Congi or Ms. Sue Barsanti of our Research and Planning Section at 916-657-7237.

T. J. CLARK
Assistant Commissioner

Safety, Service, and Security

CHP 51WP (Rev. 11-86) OPI 078

08/11/2009 TUE 14:28 FAX 530 241 1590 101_IR3380_Clerical --- Alturas Area 002/002

The individual engineering reports for the ML 3 roads to be included for mixed use are in the project record; these files are very large and not presented here.